BAU BAHÇEŞEHİR UNIVERSITY

SDG 7: AFFORDABLE AND CLEAN ENERGY



2024-2025

BAU AT A GLANCE

Since its foundation in 1998, the vision of BAU has been to be a global university known for its contribution to scientific, technological, and cultural knowledge through innovative education models and research approaches that reflect international standards as well as service to society. Currently, BAU Global Network comprises of 5 universities (Istanbul, Washington D.C., Berlin, Cyprus, Batumi), 5 liaison offices (BAU Global Azerbaijan Jordan, Uzbekistan, Mongolia, Pakistan) and 5 language schools.

Bahçeşehir University (BAU) is committed to advancing the wellbeing of local and global communities by integrating the United Nations Sustainable Development Goals (SDGs) into its institutional governance, operations, organisational culture, educational programmes, academic research and stakeholder partnerships. Through this integrated approach, BAU seeks to align its academic mission and institutional practices with sustainable development priorities and contribute to positive societal change.

Bringing together staff, students and alumni, BAU promotes a university community guided by ethical conduct, social responsibility and global citizenship. The University encourages its members to recognise their responsibilities towards one another, wider society and the environment, and to apply their knowledge and skills to building a more inclusive, equitable and sustainable future.

BAU IN THE TIMES HIGHER EDUCATION

BAU participates in the Times Higher Education (THE) Impact Rankings since 2019. According to the current rankings, BAU belongs to the 1000-12000 band in the World University Rankings, 59th in the Impact Rankings and the 251-300 in the Asia University Rankings 2026. Also, BAU is ranked as the top university in Türkiye.

The university continuously increases its standing in categories related to the UN Sustainable Development Goals. As of 2026, BAU holds the following standings in the THE Impact Rankings;

- 2nd in Gender Equality
- 6 th in Quality Education
- 77 th in Peace, Justice and Strong Institutions
- 89 th in Partnership for the Goals
- Ranks between 101-200 in Reducing Inequalities
- Ranks between 201-300 in Industry, Innovation and Infrastructure

The University takes the above-mentioned rankings as evaluation criteria for progress regarding its adherence and contribution to the UN Sustainable Development Goals and will continue to report its advancement in the rankings on a yearly basis.

In line with Sustainable Development Goal 7 (Affordable and Clean Energy), Bahçeşehir University integrates sustainability and clean energy principles into every aspect of its academic and institutional framework. The University promotes awareness of renewable energy, energy efficiency, and responsible resource use through its interdisciplinary approach and inclusive educational model.

Throughout the academic year, BAU offers a range of courses and seminars on renewable energy systems, sustainable technologies, and green transformation, while student clubs actively engage in initiatives that encourage conscious energy use and environmental responsibility within the campus community. These academic and social efforts contribute to shaping a culture that values innovation, efficiency, and sustainability.

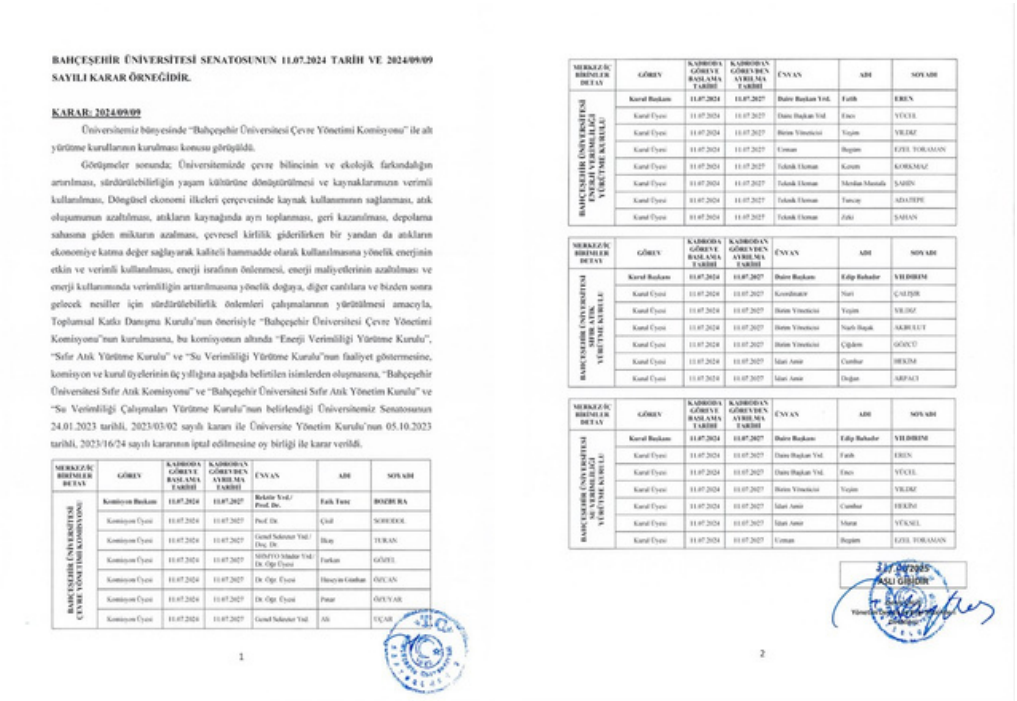
Through these integrated efforts, Bahçeşehir University continues to strengthen its contribution to the global transition toward clean, accessible, and sustainable energy for all.

Bahçeşehir University Environmental Management Commission

On 11 July 2024, the Bahçeşehir University Senate approved the establishment of the Environmental Management Commission to reinforce institutional responsibility for environmental protection, sustainable resource use, and water management. The initiative aims to enhance ecological awareness across the university community while embedding sustainability into the culture and daily operations of campus life.

The Commission operates through three specialized working groups — the Energy Efficiency Executive Board, the Zero Waste Executive Board, and the Water Efficiency Executive Board — which coordinate projects focused on improving resource efficiency, reducing waste generation, and minimizing the environmental footprint of university activities. Particularly, the Water Efficiency Executive Board, aligned with SDG6 (Clean Water and Sanitation), places a strong emphasis on responsible water consumption, wastewater reduction, and the implementation of innovative systems to promote water recycling and reuse across university facilities.

Within this framework, comprehensive efforts are directed toward preventing energy loss, reducing waste generation, and promoting wastewater reduction. By adopting a structured and integrated approach to environmental governance, Bahçeşehir University demonstrates its long-term commitment to efficient energy and water management, resource conservation, and the promotion of a sustainable campus ecosystem — one that embodies both environmental stewardship and social responsibility.



BAHÇEŞEHİR ÜNİVERSİTESİ SENATOSUNUN 11.07.2024 TARİH VE 2024/09/09 SAYILI KARAR ÖRNEĞİDİR.

KARAR: 2024/09/09

Üniversitemiz bünyesinde "Bahçeşehir Üniversitesi Çevre Yönetimi Komisyonu" ile alt yürütme kurullarının kurulması konusu görüşüldü.

Görüşmeler sonunda; Üniversitemizde çevre bilincinin ve ekolojik farkındalığın artırılması, sürdürülebilirliğin yaşam kültürüne dönüştürülmesi ve kaynaklarımızın verimli kullanılması, Döngüsel ekonomi ilkeleri çerçevesinde kaynak kullanımının sağlanması, atık oluşumunun azaltılması, atıkların kaynağında ayrı toplanması, geri kazanılması, depolama sahasına giden miktarın azalması, çevresel kirlilik giderilirken bir yandan da atıkların ekonomiye katma değer sağlayarak kaliteli hammadde olarak kullanılmasına yönelik enerjinin etkin ve verimli kullanılması, enerji israfının önlenmesi, enerji maliyetlerinin azaltılması ve enerji kullanımında verimliliğin artırılmasına yönelik doğaya, diğer canlılara ve bizden sonra gelecek nesiller için sürdürülebilirlik önlemleri çalışmalarının yürütülmesi amacıyla, Toplumsal Katkı Danışma Kurulu'nun önerisiyle "Bahçeşehir Üniversitesi Çevre Yönetimi Komisyonu"nun kurulmasına, bu komisyonun altında "Enerji Verimliliği Yürütme Kurulu", "Sıfır Atık Yürütme Kurulu" ve "Su Verimliliği Yürütme Kurulu"nun faaliyet göstermesine, komisyon ve kurul üyelerinin üç yıllığına aşağıda belirtilen isimlerden oluşmasına, "Bahçeşehir Üniversitesi Sıfır Atık Komisyonu" ve "Bahçeşehir Üniversitesi Sıfır Atık Yönetim Kurulu" ve "Su Verimliliği Çalışmaları Yürütme Kurulu"nun belirlendiği Üniversitemiz Senatosunun 24.01.2023 tarihli, 2023/03/02 sayılı kararı ile Üniversite Yönetim Kurulu'nun 05.10.2023 tarihli, 2023/16/24 sayılı kararının iptal edilmesine oy birliği ile karar verildi.

MERKEZ/İÇ BİRİMLER DETAY	GÖREV	KADRODA GÖREVE BAŞLAMA TARİHİ	KADRODAN GÖREVDEN AYRILMA TARİHİ	ÜNVAN	ADI	SOYADI
BAHÇEŞEHİR ÜNİVERSİTESİ ÇEVRE YÖNETİMİ KOMİSYONU	Komisyon Başkanı	11.07.2024	11.07.2027	Rektör Yrd./ Prof. Dr.	Fatih Tarı	BOZBURA
	Komisyon Üyesi	11.07.2024	11.07.2027	Prof. Dr.	Çiğil	SOFUOĞL
	Komisyon Üyesi	11.07.2024	11.07.2027	Genel Sekreter Yrd./ Doç. Dr.	Ilkay	TURAN
	Komisyon Üyesi	11.07.2024	11.07.2027	MESTO Müdür Yrd./ Dr. Öğr. Üyesi	Furkan	GÖZEL
	Komisyon Üyesi	11.07.2024	11.07.2027	Dr. Öğr. Üyesi	Hüseyin Gürhan	ÖZCAN
	Komisyon Üyesi	11.07.2024	11.07.2027	Dr. Öğr. Üyesi	Pınar	ÖZUYAR
	Komisyon Üyesi	11.07.2024	11.07.2027	Genel Sekreter Yrd.	Ali	UÇAR

1

MERKEZ/İÇ BİRİMLER DETAY	GÖREV	KADRODA GÖREVE BAŞLAMA TARİHİ	KADRODAN GÖREVDEN AYRILMA TARİHİ	ÜNVAN	ADI	SOYADI
BAHÇEŞEHİR ÜNİVERSİTESİ ENERJİ VERİMLİLİĞİ YÜRÜTME KURULU	Kurul Başkanı	11.07.2024	11.07.2027	Daire Başkan Yrd.	Fatih	EREN
	Kurul Üyesi	11.07.2024	11.07.2027	Daire Başkan Yrd.	Enes	YÜCEL
	Kurul Üyesi	11.07.2024	11.07.2027	Birim Yöneticisi	Yeşim	YILDIZ
	Kurul Üyesi	11.07.2024	11.07.2027	Uzman	Başım	EZEL TORAMAN
	Kurul Üyesi	11.07.2024	11.07.2027	Teknik Uzman	Kerem	KORKMAZ
	Kurul Üyesi	11.07.2024	11.07.2027	Teknik Uzman	Meriban Mustafa	ŞAHİN
	Kurul Üyesi	11.07.2024	11.07.2027	Teknik Uzman	Tuncay	ADATEPE
	Kurul Üyesi	11.07.2024	11.07.2027	Teknik Uzman	Zeki	ŞAHAN

MERKEZ/İÇ BİRİMLER DETAY	GÖREV	KADRODA GÖREVE BAŞLAMA TARİHİ	KADRODAN GÖREVDEN AYRILMA TARİHİ	ÜNVAN	ADI	SOYADI
BAHÇEŞEHİR ÜNİVERSİTESİ SIFIR ATIK YÜRÜTME KURULU	Kurul Başkanı	11.07.2024	11.07.2027	Daire Başkanı	Edip Bahadır	YILDIRIM
	Kurul Üyesi	11.07.2024	11.07.2027	Koordinatör	Nuri	ÇALIŞIR
	Kurul Üyesi	11.07.2024	11.07.2027	Birim Yöneticisi	Yeşim	YILDIZ
	Kurul Üyesi	11.07.2024	11.07.2027	Birim Yöneticisi	Nazlı Başak	AKBULUT
	Kurul Üyesi	11.07.2024	11.07.2027	Birim Yöneticisi	Çiğdem	GÖÇCÜ
	Kurul Üyesi	11.07.2024	11.07.2027	İdari Asist.	Cumhur	HEKİM
	Kurul Üyesi	11.07.2024	11.07.2027	İdari Asist.	Doğan	ARPACI

MERKEZ/İÇ BİRİMLER DETAY	GÖREV	KADRODA GÖREVE BAŞLAMA TARİHİ	KADRODAN GÖREVDEN AYRILMA TARİHİ	ÜNVAN	ADI	SOYADI
BAHÇEŞEHİR ÜNİVERSİTESİ SIFIR ATIK YÜRÜTME KURULU	Kurul Başkanı	11.07.2024	11.07.2027	Daire Başkanı	Edip Bahadır	YILDIRIM
	Kurul Üyesi	11.07.2024	11.07.2027	Daire Başkan Yrd.	Fatih	EREN
	Kurul Üyesi	11.07.2024	11.07.2027	Daire Başkan Yrd.	Enes	YÜCEL
	Kurul Üyesi	11.07.2024	11.07.2027	Birim Yöneticisi	Yeşim	YILDIZ
	Kurul Üyesi	11.07.2024	11.07.2027	İdari Asist.	Cumhur	HEKİM
	Kurul Üyesi	11.07.2024	11.07.2027	İdari Asist.	Murat	YÜKSEL
	Kurul Üyesi	11.07.2024	11.07.2027	Uzman	Başım	EZEL TORAMAN

ASLI GİBİDİR

2

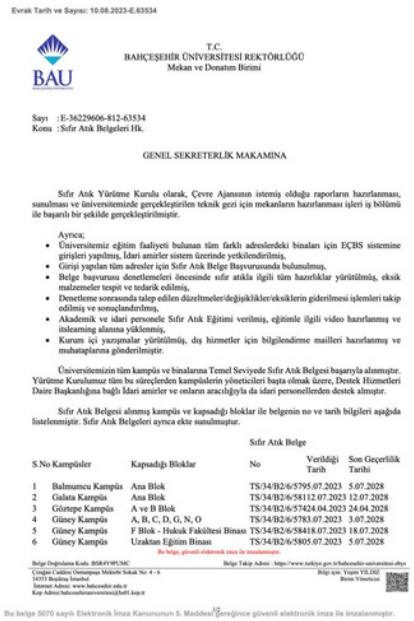
Bahçeşehir University Zero Waste Certifications

The Zero Waste Executive Board at Bahçeşehir University successfully coordinated the preparation and submission of reports required by the Environmental Agency, as well as the organization of on-site inspections and technical visits. Through structured collaboration between campus managers, administrative units, and support services, all required processes were completed efficiently and in line with national sustainability standards.

The initiative covered all university buildings and campuses where educational activities take place. Each site was registered in the Environmental Information System, administrative supervisors were authorized within the platform, and zero waste certification applications were submitted for all locations. Ahead of inspections, all necessary preparations were finalized, materials were supplied, and deficiencies were resolved in accordance with the audit feedback. In addition, academic and administrative staff received dedicated Zero Waste Training, and an instructional video was produced and shared on the university's digital learning platform.

As a result of these efforts, a total of ten Zero Waste Certificates have been granted to Bahçeşehir University, covering all campuses and buildings where educational activities are carried out. The process not only enhanced the university's waste management capacity but also reinforced its institutional culture of environmental responsibility and cross-departmental collaboration. These actions have also contributed to more efficient use of natural resources, including the responsible management of water throughout campus operations—strengthening the University's holistic approach to sustainability.

Link: https://aday.bau.edu.tr/wp-content/uploads/2025/02/Sifir_atik_belgeleri.pdf



Evrak Tarih ve Sayısı: 10.08.2023-E.63534

T.C.
BAHÇEŞEHİR ÜNİVERSİTESİ REKTÖRLÜĞÜ
Mekan ve Donatım Birimi

Sayı : E-36229606-812-63534
Konu : Sıfır Atık Belgeleri Hk.

GENEL SEKRETERLİK MAKAMINA

Sıfır Atık Yürütme Kurulu olarak, Çevre Ajansının istemiş olduğu raporların hazırlanması, sunulması ve üniversitemizde gerçekleştirilen teknik gezi için mekanların hazırlanması işleri iş bölümü ile başarılı bir şekilde gerçekleştirilmiştir.

Ayrıca;

- Üniversitemiz eğitim faaliyeti bulunan tüm farklı adreslerdeki binaları için EÇBS sistemine girişleri yapılmış, İdari amirler sistem üzerinde yetkilendirilmiş,
- Girişi yapılan tüm adresler için Sıfır Atık Belge Başvurusunda bulunulmuş,
- Belge başvurusu denetlemeleri öncesinde sıfır atıkla ilgili tüm hazırlıklar yürütülmüş, eksik malzemeler tespit ve tedarik edilmiş,
- Denetleme sonrasında talep edilen düzeltmeler/değişiklikler/eksiklerin giderilmesi işlemleri takip edilmiş ve sonuçlandırılmış,
- Akademik ve idari personele Sıfır Atık Eğitimi verilmiş, eğitimle ilgili video hazırlanmış ve itslearning alanına yüklenmiş,
- Kurum içi yazışmalar yürütülmüş, dış hizmetler için bilgilendirme mailleri hazırlanmış ve muhataplarına gönderilmiştir.

Üniversitemizin tüm kampüs ve binalarına Temel Seviyede Sıfır Atık Belgesi başarıyla alınmıştır. Yürütme Kurulumuz tüm bu süreçlerden kampüslerin yöneticileri başta olmak üzere, Destek Hizmetleri Daire Başkanlığına bağlı İdari amirler ve onların aracılığıyla da idari personellerden destek almıştır.

Sıfır Atık Belgesi alınmış kampüs ve kapsadığı bloklar ile belgenin no ve tarih bilgileri aşağıda listelenmiştir. Sıfır Atık Belgeleri ayrıca ekte sunulmuştur.

S.No	Kampüsler	Kapsadığı Bloklar	Sıfır Atık Belge No	Verildiği Tarih	Son Geçerlilik Tarihi
1	Balmumcu Kampüs	Ana Blok	TS/34/B2/6/5795	07.2023	5.07.2028
2	Galata Kampüs	Ana Blok	TS/34/B2/6/58112	07.2023	12.07.2028
3	Göztepe Kampüs	A ve B Blok	TS/34/B2/6/57424	04.2023	24.04.2028
4	Güney Kampüs	A, B, C, D, G, N, O	TS/34/B2/6/5783	07.2023	3.07.2028
5	Güney Kampüs	F Blok - Hukuk Fakültesi Binası	TS/34/B2/6/58418	07.2023	18.07.2028
6	Güney Kampüs	Uzaktan Eğitim Binası	TS/34/B2/6/5805	07.2023	5.07.2028
7	Galata Kampüs	İdea Binası	TS/34/B3/6/18824	07.2023	24.07.2028
8	Kemerburgaz Kampüs	Tüm Bloklar, Girişimcilik Merkezi, Yurtlar ve Misafirhane Bloğu	TS/34/B2/6/5879	08.2023	9.08.2028
9	Kuzey Kampüs	A,B ve C Blok	TS/34/B2/6/57321	03.2023	21.03.2028
10	Pera Kampüs	Ana Blok	TS/34/B2/6/58524	07.2023	24.07.2028

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu: BSR4V9PUMC — Belge Takip Adresi : https://www.turkiye.gov.tr/bahcesehir-universitesi-ebys

Çırağan Caddesi Osmanpaşa Mektebi Sokak No: 4 - 6
34353 Beşiktaş İstanbul
İnternet Adresi: www.bahcesehir.edu.tr
Kep Adresi:bahcesehiruniversitesi@hs01.kep.tr

Bilgilerinize arz ederim.

Saygılarımla.

Ali UÇAR
Daire Başkanı Vekili

Ek:Tüm Kampüsler Sıfır Atık Belgeleri (10 adet)

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34353 Beşiktaş İstanbul
İnternet Adresi: www.bahcesehir.edu.tr
Kep Adresi:bahcesehiruniversitesi@hs01.kep.tr

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.



T.C. İSTANBUL VALİLİĞİ ÇEVRE,ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

SIFIR ATIK BELGESİ

(Temel Seviye)

Belge No: TS/34/B2/6/574 Tarih: 24/04/2023

Adı: BAHÇEŞEHİR ÜNİVERSİTESİ GÖZTEPE KAMPÜSÜ
Adresi: İSTANBUL,SAHRAYICEDIT Mahallesi, BATMAN SOKAK, No: 60 -68-2, KADIKÖY,Türkiye
Vergi No: 1310162959
Türü: Bina/Yerleşke

12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak **Sıfır Atık Belgesi**'ni almaya hak kazanmıştır.

Hacı Mehmet GÜNER
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü
E-İMZALIDIR

Belge Son Geçerlilik Tarihi:
24/04/2028

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.



T.C. İSTANBUL VALİLİĞİ ÇEVRE,ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

SIFIR ATIK BELGESİ

(Temel Seviye)

Belge No: TS/34/B2/6/579 Tarih: 05/07/2023

Adı: BAHÇEŞEHİR ÜNİVERSİTESİ BALMUMCU BİNASI
Adresi: GAYRETTEPE Mahallesi, BARBAROS BULVAR, No: 153 /1-, BEŞİKTAŞ, İSTANBUL, Türkiye
Vergi No: 1310162959
Türü: Bina/Yerleşke

12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak **Sıfır Atık Belgesi**'ni almaya hak kazanmıştır.

Hacı Mehmet GÜNER
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü
E-İMZALIDIR

Belge Son Geçerlilik Tarihi:
05/07/2028

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.



T.C. İSTANBUL VALİLİĞİ ÇEVRE,ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

SIFIR ATIK BELGESİ

(Temel Seviye)

Belge No: TS/34/B2/6/581 Tarih: 12/07/2023

Adı: BAHÇEŞEHİR ÜNİVERSİTESİ GALATA KAMPÜSÜ
Adresi: İSTANBUL,MÜEYYETZADE Mahallesi, KEMERALTI CADDE, No: 24 A-, BEYOĞLU,Türkiye
Vergi No: 1310162959
Türü: Bina/Yerleşke

12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak **Sıfır Atık Belgesi**'ni almaya hak kazanmıştır.

Hacı Mehmet GÜNER
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü
E-İMZALIDIR

Belge Son Geçerlilik Tarihi:
12/07/2028

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.



T.C. İSTANBUL VALİLİĞİ ÇEVRE,ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

SIFIR ATIK BELGESİ

(Temel Seviye)

Belge No: TS/34/B2/6/578 Tarih: 03/07/2023

Adı: Bahçeşehir Üniversitesi- Güney Kampüs
Adresi: İSTANBUL, YILDIZ Mahallesi, OSMAN PAŞA MEKTEBİ ÇIKMAZI SOKAK, No: 4-1, BEŞİKTAŞ,Türkiye
Vergi No: 1310162959
Türü: Bina/Yerleşke

12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak **Sıfır Atık Belgesi**'ni almaya hak kazanmıştır.

Hacı Mehmet GÜNER
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü
E-İMZALIDIR

Belge Son Geçerlilik Tarihi:
03/07/2028

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belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

BAU Activities and Initiatives Supporting SDG7: Clean and Affordable Energy

Enerjisa: A Better and Sustainable Future Course—Advancing Energy Literacy through University–Industry Collaboration



During the second semester of the 2024–2025 academic year, Bahçeşehir University delivered the second edition of the "Enerjisa: A Better and Sustainable Future" course in collaboration with Enerjisa Enerji, CIFAL Istanbul and UNITAR. The semester-long course brought BAU students together with professionals working across different areas of the energy sector through weekly guest sessions. Connecting academic learning with industry experience, the programme explored sustainable energy alongside its environmental, economic, technological and social dimensions.

At the centre of the course was SDG 7: Affordable and Clean Energy, with an emphasis on understanding energy efficiency, sustainable energy practices and the transformation of the energy sector. Students explored how energy companies and public institutions approach sustainability, how energy policies shape the sector's future, and how efficiency can support more responsible use of energy resources. These discussions strengthened students' understanding of the relationship between energy services, environmental responsibilities and long-term development needs.

Energy efficiency provided a particularly important link between policy and practice. The course addressed energy efficiency policies, sustainability-oriented practices and strategic approaches relevant to Türkiye's energy future. Through engagement with sector professionals, students had opportunities to consider the economic, environmental and social dimensions of energy transformation together. This approach helped frame energy efficiency as a practical component of sustainable energy systems, connecting resource use and environmental objectives with institutional and business decisions.

The programme also examined how digital transformation and green finance intersect with the energy transition. Discussions on artificial intelligence, data-driven change and evolving investment models introduced students to technological and financial developments relevant to the sector. By placing these subjects within a broader sustainability framework, the course encouraged students to consider how innovation and investment decisions can support the development of more efficient and sustainable energy practices.

Beyond technical and policy discussions, the course explored the social responsibilities of the energy sector. Topics included sustainability communication, social impact initiatives, corporate volunteerism and the integration of sustainability into organisational culture. Weekly guest contributions and opportunities for questions enabled students to engage directly with professional perspectives and connect energy-related challenges with wider questions of public awareness, corporate responsibility and social participation.

The course's primary contribution to SDG 7: Affordable and Clean Energy lay in strengthening energy literacy and providing sustained educational engagement with energy efficiency and sustainable energy transformation. It also supported SDG 4: Quality Education through learning enriched by professional expertise, SDG 13: Climate Action through discussion of the environmental dimensions of energy choices, and SDG 9: Industry, Innovation and Infrastructure through its attention to technological transformation in the energy sector. The collaboration between Bahçeşehir University, Enerjisa Enerji, CIFAL Istanbul and UNITAR further supported SDG 17: Partnerships for the Goals by bringing university, private-sector and international training perspectives into a shared educational programme.





Enerjisa: A Better and Sustainable Future Course program schedule is below:

Week	Lecture Content	Guest Lecturer	Position / Institution
Week 1	Energy Sector: Enerjisa and 'A Better Future Platform'	Ebru Türegün	Head of Sustainability and Corporate Capabilities, Enerjisa Enerji
Week 2	Sustainability and Corporate Sustainability	Irmak Pınar	Sustainability Group Manager, Enerjisa Enerji
Week 3	Environmental Sustainability	Dr. Tuba Budak	Leader of Resource Efficiency and Clean Energy Research Group, TÜBİTAK MAN
Week 4	Economic Sustainability	Prof. Dr. Emre Alkin	Economist, Rector of Topkapı University
Week 5	Sustainability Communication and Collaborations	Gökbürt Demirel	Communications Director, Enerjisa Enerji
Week 6	Using Artificial Intelligence for a Better Future	Ercüment Büyükşenyer	Consultant, Hayal Akademisi
Week 7	Turkey's Sustainability Vulnerabilities and Transformation	Akan Abdula	Researcher / Writer, FutureBright Group
Week 8	Social Sustainability and Social Impact	Prof. Dr. Itır Erhart	Dean, Faculty of Communication, Bilgi University
Week 9	Meeting with CEO & Certificate Ceremony	Murat Pınar	CEO, Enerjisa Enerji



CERTIFICATE OF COMPLETION

İPEK BURÇAK TURGUT

Has successfully completed the course on

EnerjiSA: A Better and Sustainable Future

2024-2025 Academic Year

organized by EnerjiSA, CO-OP, CIFAL Istanbul, UNITAR and Bahçeşehir University

Alex Mejia
Head, CIFAL Global Network
Director, Division for People and Social Inclusion, UNITAR

Murat Pınar
CEO,
EnerjiSA

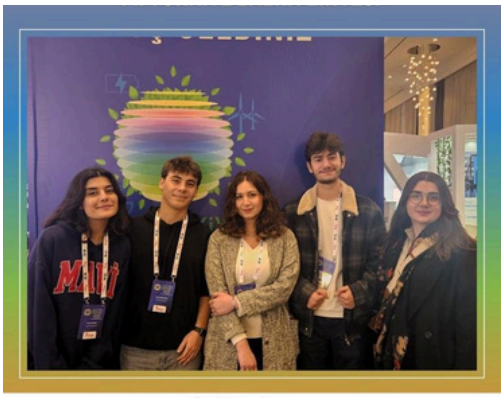
Prof. Çinli Sohodol
Director,
CIFAL Istanbul

BAU Energy Student Club at the 14th Türkiye Energy Summit

In the 2024-2025 academic year, students from the Bahçeşehir University Energy Club participated in the 14th Türkiye Energy Summit, held at the Hilton Istanbul Bomonti Hotel & Conference Center. Bringing together key actors of the energy sector, the summit focused on the economics of the future of energy, offering valuable insights into the evolving dynamics of the industry.

Throughout the sessions, our students engaged in discussions on the future of Türkiye's energy markets, carbon transition, renewable energy investments, and innovative energy technologies. They connected with sector leaders, strengthened their professional networks, and gained first-hand perspectives on shaping a more sustainable energy future.

BAU Energy Club remains committed to empowering youth to take an active role in the energy transition and advancing Bahçeşehir University's sustainability vision aligned with the United Nations Sustainable Development Goals — particularly Affordable and Clean Energy (SDG 7), Climate Action (SDG 13), and Partnerships for the Goals (SDG 17). In line with our efforts within the Times Higher Education (THE) Impact Rankings, we continue to promote strong university–industry partnerships and contribute to developing the next generation of responsible energy leaders.





Shaping the Future of Energy – AR-Gelecek Conference Participation

In the 2024-2025 academic year, Bahçeşehir University Energy Student Club members participated in the AR-Gelecek Conference hosted by ITU IEEE PES Society, where they explored innovative research in the energy sector including advanced wind technologies, nuclear energy systems, and emerging R&D practices. By engaging with leading experts and companies, students strengthened their understanding of sustainable energy transformation and sectoral innovation.

The activity supports Bahçeşehir University's commitment to the UN Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy) through clean energy awareness, SDG 9 (Industry, Innovation and Infrastructure) through R&D-focused learning, SDG 13 (Climate Action) through discussions on low-carbon technologies, and SDG 17 (Partnerships for the Goals) via inter-university collaboration.





Energy Law Certificate Program



In the 2024-2025 academic year, organized by Bahçeşehir University School of Professional Studies (BAUPRO) in cooperation with CIFAL Istanbul – UNITAR, the Energy Law Certificate Program as a comprehensive initiative to address the growing need for legal expertise in the energy sector. Conducted online over five weeks (60 hours), the program explored the legal frameworks governing energy markets, contractual structures, and dispute resolution mechanisms. Participants included law students, graduates, and mid-to-senior professionals working in the energy industry.

The detailed curriculum covered General Energy Law, Privatization in the Electricity Market, Electricity Market Contracts, Natural Gas Supply Contracts, Turkish Petroleum Market under Law No. 5015, LPG Market under Law No. 5327, Nuclear Energy, Competition Law, Licensing Procedures, and International Energy Disputes. Through practical case studies and sample court decisions, the program provided participants with both theoretical depth and sectoral insight.

This certified program contributes to Affordable and Clean Energy (SDG 7) by promoting legal frameworks that support sustainable energy systems; advances Quality Education (SDG 4) by building interdisciplinary expertise; strengthens Peace, Justice, and Strong Institutions (SDG 16) through transparent and accountable energy governance; and fosters Partnerships for the Goals (SDG 17) by encouraging collaboration between academia, government, and industry in the pursuit of a resilient and equitable energy transition.

https://baupro.bau.edu.tr/kurumsal/egitim/24

Bahçeşehir University's Affordable and Clean Energy Related Courses (2024-2025 Academic Year)

Bahçeşehir University (BAU) aligns its educational, research, and community engagement strategies with the United Nations Sustainable Development Goals (SDGs), reinforcing its dedication to sustainable progress and social responsibility. In particular, BAU emphasizes Affordable and Clean Energy (SDG 7), Quality Education (SDG 4), Sustainable Cities and Communities (SDG 11), and Climate Action (SDG 13), integrating sustainability principles into its curricula and institutional practices.

During the Fall and Spring semesters of the 2024 academic year, several courses including certificated ones were offered to deepen students' understanding of the energy sector from environmental, economic, and political perspectives.

Courses such as Alternative & Renewable Energy Systems I, Energy from a Sustainability Perspective, Energy Economics, Politics of Oil and Energy, Energy Management, Fundamentals of Solar Energy Systems, Introduction to Wind Energy Engineering, Energy Efficient Building Design, and Energy Policies have equipped students with the knowledge and awareness necessary to engage in sustainable energy production, management, and policy-making processes.

Through these programs, Bahçeşehir University reaffirms its commitment to using education as a driving force for a sustainable future, empowering students to become proactive contributors to the global energy transition.

https://akts.bau.edu.tr/

Table of Courses Opened in 2024-2025 Academic Year:

Course Code	Course Title	Semester	Language of Instruction	Course Type	Level	Delivery Method
ESE3103	Alternative & Renewable Energy Systems I	Fall	English	Must Course	Undergraduate	Face to Face
GEP0643	Energy from a Sustainability Perspective	Spring	English	GE-Elective	Undergraduate	Face to Face
MCH5613	Introduction to Wind Energy Engineering	Fall	English	Departmental Elective	Graduate	Face to Face
ESE5509	Fundamentals of Solar Energy Systems	Spring	English	Departmental Elective	Graduate	Face to Face
ESE2304	Energy Economics	Fall	English	Must Course	Undergraduate	Face to Face
UIL5131	Energy Policies	Spring	Turkish	Departmental Elective	Graduate	Face to Face
ARC5405	Energy Efficient Building Design	Spring	English	Departmental Elective	Graduate	Face to Face
POL4521	Politics of Oil and Energy	Fall	English	Departmental Elective	Undergraduate	Face to Face
ESE5501	Energy Management	Fall	English	Departmental Elective	Graduate	Face to Face

Certificate Sample from the Courses:



Roundtable with Civil Society: "Towards COP29 – Evaluating Challenges, Solutions, and Policy Pathways for Climate Action in Türkiye"





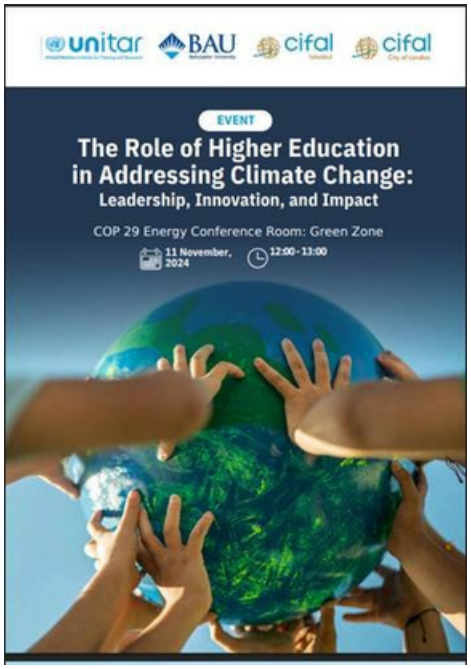
In the 2024-2025 academic year, Bahçeşehir University and CIFAL Istanbul (UNITAR), in collaboration with the Corporate Social Responsibility Association of Türkiye (CSR Turkey) and several leading environmental NGOs, jointly organized a high-level roundtable titled "Towards COP29: Civil Society Evaluates." The meeting brought together several civil society representatives, academics, and policy experts to assess Türkiye's environmental and climate change agenda in the post-COP28 period and to contribute to the formation of national strategies ahead of COP29.

The roundtable provided a crucial policy dialogue platform where participants discussed the role of civil society in advancing climate action, the transition to renewable energy, and the integration of sustainability into national development frameworks. Expert contributions by Özlem Katısöz, Climate and Energy Policy Coordinator at CAN Europe, and Barış Doğru, Editor-in-Chief of EkoIQ, offered analytical insights into Türkiye's evolving climate policy landscape, highlighting both progress and challenges in meeting international commitments.

Through this dialogue, participants collectively emphasized the need for a realistic roadmap toward reducing dependence on fossil fuels and expanding renewable energy investments. The event concluded with a shared commitment to strengthen cooperation between academia, civil society, and the private sector—a key step in supporting evidence-based policymaking and inclusive climate governance.

By fostering informed discussion and cross-sector collaboration, the roundtable directly contributes to SDG 13 (Climate Action) by advancing national policy development and raising awareness on climate resilience, while also supporting SDG 17 (Partnerships for the Goals) through its multi-stakeholder approach to sustainable environmental governance.

Special Session at COP29: Bahçeşehir University and United Nations Institute for Training and Research (UNITAR)- Advancing Climate Policy, Education, and Global Best Practices



In the 2024-2025 academic year, during the United Nations Climate Change Conference (COP29) in Baku, Azerbaijan, a landmark session titled "The Role of Higher Education in Addressing Climate Change: Leadership, Innovation, and Impact" was co-organized by UNITAR, CIFAL Istanbul, Bahçeşehir University, and CIFAL City of London. Marking the first time a Turkish university hosted an independent session at COP, this event positioned Bahçeşehir University as a key contributor to global climate dialogue and higher education's policy impact.

The session convened academic leaders, policymakers, and sustainability experts to explore how universities can shape climate solutions through research, education, and innovation. Discussions focused on embedding climate literacy across curricula, promoting interdisciplinary collaboration, and developing science-based strategies for resilience and adaptation. Participants emphasized that universities play a pivotal role not only in knowledge generation, but also in influencing national and international climate policy through research-driven insights and stakeholder engagement.

In alignment with UNITAR's global learning objectives, the session highlighted best practices and comparative approaches to integrating climate change education into higher education, fostering capacity-building initiatives for young leaders, educators, and decision-makers. Expected outcomes included the creation of cross-regional networks between universities, NGOs, and government institutions; the sharing of case studies and innovative models; and the development of policy frameworks to accelerate sustainable transformation.

Representing Türkiye's academic leadership on the global stage, Prof. Dr. Esra Hatipoğlu, Rector of Bahçeşehir University, and Prof. Dr. Çisil Sohodol, Director of CIFAL Istanbul, shared the institution's experience in advancing sustainability-centered education and community partnerships. The session was moderated by Dr. Ebru Canan-Sokullu, Associate Director at the CIFAL Global Network (UNITAR), who underscored the importance of university–organization cooperation in shaping effective climate governance frameworks.

By integrating education, research, policy development, and international best practice exchange, this pioneering COP29 special session exemplified Bahçeşehir University's leadership in sustainable transformation. It reinforced the University's commitment to SDG 13 (Climate Action) through policy engagement, SDG 4 (Quality Education) by promoting climate literacy and capacity-building, and SDG 17 (Partnerships for the Goals) through international collaboration, best practice exchange, and global climate resilience.



Sustainable Logistics and Supply Chain Panel



Held as part of the LOG4943 Sustainable Logistics and Supply Chain course, CIFAL Istanbul organized a session titled "Sustainable Logistics and Supply Chain" featuring Tolga Kazancıoğlu, Network Optimization Lead at A.P. Moller-Maersk in Dubai, in the 2024-2025 academic year. The session was moderated by Asst. Prof. Yasemin Ülker, Deputy Director of CIFAL Istanbul.

The discussion focused on aligning global logistics systems with sustainability goals through improved efficiency, responsible management, and reduced environmental impact. Participants examined approaches such as data-driven optimization, energy-efficient operations, and the use of cleaner energy sources within logistics processes to minimize emissions and support long-term resource sustainability.



CIFAL Istanbul Team Visited Earthquake Zone



The CIFAL Istanbul team visited Malatya during the 2024-2025 academic year, one of the provinces affected by the February 6 earthquakes, to conduct educational activities focused on sustainability and environmental awareness. As part of the "Heroes of the Nature: Raising Awareness on Sustainability" seminar, organized by Bright Futures Association, Malatya Battalgazi Municipality, Malatya Municipality, CIFAL Istanbul, UNITAR, and Bahçeşehir University, Aslıcan Açık and Eren Yalınkaya from CIFAL Istanbul delivered a presentation on climate change, renewable energy, water conservation, and sustainable urban life, encouraging children and families to adopt environmentally responsible habits.

The discussions highlighted the importance of integrating renewable and clean energy systems into the city's reconstruction process to ensure long-term resilience, energy efficiency, and sustainable urban development. During the visit, meetings were also held with local authorities to discuss sustainable rebuilding strategies and resource-efficient recovery practices for the region.





TÜBİTAK 4007 Giresun Science Festival: “Green Technology – Scientific Solutions for a Sustainable Future”

Under the coordination of the Giresun Provincial Directorate of National Education and in partnership with Giresun Municipality, Giresun University, and Bahçeşehir University, the TÜBİTAK 4007 Science Festival themed “Green Technology: Scientific Solutions for a Sustainable Future” was held from during the 2024-2025 academic year in Giresun. The event, which attracted strong participation from students, educators, and the local community, featured 23 workshops, two conferences, one panel, and one scientific public lecture focused on the integration of technology, clean energy, and environmental responsibility.

With the active contribution of academics from Bahçeşehir University, the festival encouraged scientific inquiry and awareness of sustainable practices, particularly in areas related to renewable energy, energy efficiency, and environmentally friendly innovation. By engaging the public in interactive sessions and research-based discussions, the initiative helped strengthen community understanding of energy-conscious solutions to environmental challenges and fostered a mindset supportive of sustainable development.

https://4000.tubitak.gov.tr/4007/124b703





Article: “Has the Last Super Cycle in Crude Oil Price Ended? A Maximum Drawdown Approach Using Fractional Brownian Motion”

This study applies a maximum drawdown approach with fractional Brownian motion to analyze the long-term cyclical behavior of global crude oil prices using monthly data from 1996 to 2020. The findings indicate that the average downturn in oil price cycles spans approximately 124 months, with the most recent cycle concluding in September 2018, marking the beginning of a recovery phase.

By introducing a transparent and data-driven model for identifying energy market cycles, the article provides valuable insights for energy policymakers, investors, and market stakeholders in both oil-exporting and importing nations. The research supports SDG 7 (Affordable and Clean Energy) by promoting strategic energy planning, stability, and efficient resource management, enabling more resilient and sustainable energy systems in line with global transition goals.

https://research.bau.edu.tr/en/publications/has-the-last-super-cycle-in-crude-oil-price-ended-a-maximum-drawd



Applied Stochastic Models in Business and Industry

RESEARCH ARTICLE

Has the Last Super Cycle in Crude Oil Price Ended? a Maximum Drawdown Approach Using Fractional Brownian Motion

M. Salcı-Bilici, F. Pınar Erdem, İbrahim Ünalmış, C. Vardar-Acar

First published: 05 December 2024 | https://doi.org/10.1002/asmb.2905

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ABSTRACT

Identifying the start and end dates of past oil price super cycles attracts significant attention in the literature. However, there are limited attempts to construct a formal methodology for determining the duration and maximum drawdown of a typical oil price super cycle. This paper aims to fill this gap by identifying the pricing and duration properties of a super cycle using a fractional Brownian motion model (fBm). We calibrate the fBm and conduct simulations using data from January 1996 to September 2020. The simulation results indicate that the maximum drawdown is expected to last 124 months. This result implies that the last oil price super-cycle ended in September 2018. In other words, our findings imply that oil prices are currently in a bull market. The findings carry significant policy implications for policymakers in both oil-exporting and -importing countries, as well as financial market players.

Sustainability School Certificate Program



Bahçeşehir University, in collaboration with CIFAL Istanbul, UNITAR launched the Sustainability School Certificate Program under the BAUPRO framework to empower professionals and leaders committed to embedding sustainability into the core of their institutional and personal practices.

Through its comprehensive eight-module structure, the program places particular emphasis on responsible resource and water management, highlighting the importance of clean water accessibility, sanitation awareness, and ecosystem protection as integral components of sustainable growth. Within the Environmental Sustainability and Resource Management module, participants explore innovative strategies for water efficiency, infrastructure resilience, and sustainable urban systems, addressing one of the key challenges of a livable and equitable future.

Participants who successfully complete the program receive a UNITAR-accredited certificate jointly signed by CIFAL Istanbul, UNITAR, and Bahçeşehir University, recognizing their expertise in sustainable transformation. By combining academic depth with practical application, the program nurtures leaders capable of translating sustainability goals into action—particularly in advancing responsible water and resource stewardship across sectors.

https://baupro.bau.edu.tr/kurumsal/egitim/39





The Key to Improving Your Business, Planet, and Society: Corporate Sustainability and ESG





As part of the Environmental, Social, and Economic Sustainability Certificate Program offered through BAUGO, Bahçeşehir University continues to empower professionals with the knowledge and tools to integrate sustainability principles into business strategies. The training session titled "The Key to Improving Your Business, Planet, and Society: Corporate Sustainability and ESG", led by Prof. Dr. Çisil Sohodol, Director of CIFAL Istanbul and Professor at BAU Faculty of Communication, explored how companies can adopt a holistic approach that balances environmental responsibility, social impact, and ethical governance.

Throughout the session, participants examined the intersection of ESG practices and the Sustainable Development Goals, learning how corporate actions can contribute to global sustainability targets. Special attention was given to the role of environmental accountability, particularly in managing resources efficiently and reducing ecological footprints. The discussion underscored how effective water management, pollution prevention, and sustainable production cycles are becoming integral elements of corporate sustainability strategies.

By emphasizing responsible governance and data-driven ESG implementation, the program encouraged participants to transform their organizations into drivers of positive change, advancing both business resilience and environmental well-being. This initiative demonstrates Bahçeşehir University's ongoing commitment to equipping individuals and institutions with the competencies necessary to achieve the 2030 Agenda for Sustainable Development through practical and impactful learning experiences.

https://baugo.online/course/isletmenizi-gezegeni-ve-toplumu-gelistirmenin-anahtari-kurumsal-surdurulebilirlik-ve-esg

Photosynthesis and Hydrogen Energy Research for Sustainable Energy: 12th International Conference at Bahçeşehir University

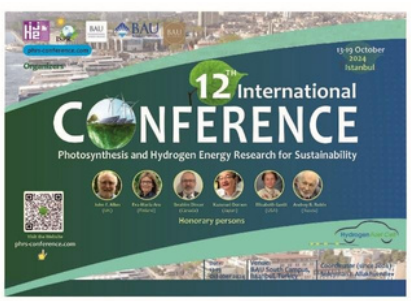
Bahçeşehir University's Faculty of Engineering and Natural Sciences hosted the 12th International Conference on "Photosynthesis and Hydrogen Energy Research for Sustainability" in Istanbul. Bringing together scholars, researchers and industry professionals from different countries, the conference provided an international platform for exchanging scientific knowledge on photosynthesis, biological hydrogen production and sustainable energy technologies. It also honoured distinguished researchers from the United Kingdom, Finland, Canada, Japan, the United States and Russia.

The scientific programme explored fundamental processes and technological challenges relevant to the development of cleaner energy systems. Topics included photosynthetic electron transfer, water oxidation, biological hydrogen production, hydrogen purification and storage, and developments in the global hydrogen economy. These discussions connected research into biological energy conversion with potential applications in sustainable hydrogen production, while addressing the processing and storage challenges involved in its use as an energy carrier.

The conference served as a major scientific platform for sharing research and technological progress on hydrogen production methods, energy storage, and photosynthetic processes that contribute to a low-carbon future. By fostering interdisciplinary dialogue between academia and the energy sector, PHRS-2024 promoted collaboration for cleaner and more efficient energy solutions.

This international gathering, organized with the participation of world-renowned scholars including John Allen (UK), Eva-Mari Aro (Finland), Kazunari Domen (Japan), Ibrahim Dinçer (Canada), Elizabeth Gantt (USA), and Andrey Rubin (Russia), reflected the growing global emphasis on renewable hydrogen as a cornerstone of sustainable energy transformation.

The conference supports SDG 7: Affordable and Clean Energy by promoting scientific knowledge exchange on biological energy conversion and hydrogen technologies relevant to cleaner energy systems. Through its hosting role, Bahçeşehir University brought together academic and industry perspectives on sustainable energy research, supporting dialogue across disciplines and national boundaries. The event contributed to the dissemination of research that can inform future advances in sustainable hydrogen production and clean energy technologies.
https://bau.edu.tr/etkinlikler/288-phrs-konferansi





Green Dialogue Meeting: Climate Law and Legal Frameworks for Renewable Energy

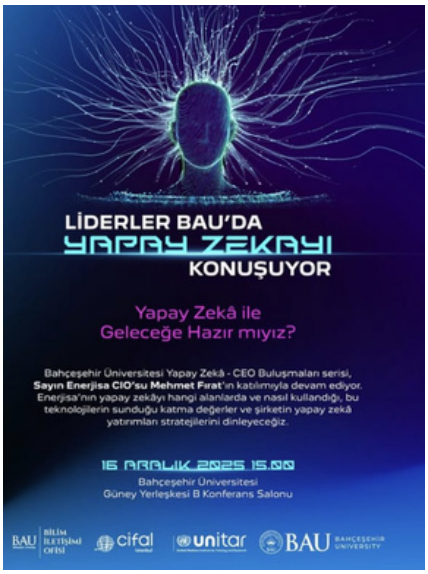
Held in 2025, The Green Dialogue Meeting examined how climate law can support the transition to clean energy through legal frameworks governing renewable energy sources and energy efficiency. Discussions addressed the role of legislation in translating climate commitments into enforceable responsibilities for public institutions and economic actors, connecting Türkiye's 2053 net-zero emissions and green development objectives with the transformation of energy production and consumption.

The meeting explored laws and regulatory approaches relevant to renewable energy development, alongside the role of energy efficiency standards in reducing energy demand and emissions. Participants considered how clear legal obligations, monitoring systems and accountability mechanisms can support the implementation and continuity of clean energy policies. The discussion also addressed the alignment of domestic energy and climate policies with the Paris Agreement and other international commitments.

The meeting contributed to SDG 7: Affordable and Clean Energy by promoting informed dialogue on the legal foundations of renewable energy development and improved energy efficiency. By examining the relationship between climate legislation, institutional responsibilities and the green energy transition, it highlighted how effective regulation can support progress towards more sustainable energy systems. Its focus on the legal dimensions of energy transition also supported understanding of how climate objectives can guide energy policy and implementation.



Leaders Discuss Artificial Intelligence at BAU II: AI Innovation and the Future of the Energy Sector





In 2025, Bahçeşehir University hosted the seminar "Leaders Discuss Artificial Intelligence at BAU II: Are We Ready for the Future with AI?" at its South Campus in collaboration with the BAU Science Communication Office. The event examined the transformative influence of artificial intelligence on the energy sector, offering participants a sector-specific perspective on how emerging technologies are reshaping operational processes, strategic planning, investment priorities, and institutional decision-making.

During the programme, Mehmet Fırat, Chief Information Officer of Enerjisa, discussed how AI is being applied to operational management, long-term planning, and value creation within the energy industry. His presentation connected technological development with practical industry experience, helping participants understand how data-driven systems can improve efficiency, support more informed decisions, and guide future-oriented innovation and investment. The seminar thereby strengthened knowledge exchange between higher education and industry around the real-world adoption of AI.

By creating a platform for the exchange of expertise on industrial AI applications and digital transformation, the seminar contributed directly to SDG 9: Industry, Innovation and Infrastructure. Its focus on the role of AI in improving energy-sector operations is also aligned with SDG 7: Affordable and Clean Energy, particularly through the potential of intelligent technologies to support greater efficiency and more sustainable energy systems. The event further supported SDG 4: Quality Education by making current technological and sectoral knowledge accessible within the university environment and encouraging informed discussion about the responsible development of future technologies.

TÜBİTAK 1833 SAYEM Green Transformation Project: Developing an Ecosystem for Hydrogen Production, Storage and Transport Applications



Bahçeşehir University joined a consortium led by Ford Otomotiv San. A.Ş. for the project "Developing an Ecosystem for Hydrogen Production, Storage, Use in Transport and Associated Product Development," which was selected for support under the TÜBİTAK 1833 Industrial Innovation Network Mechanism (SAYEM) Green Transformation Call. Bringing together the University, academic entrepreneurs and industrial partners, the project addresses interconnected stages of hydrogen technology development, from production and storage to applications in transport.

Bahçeşehir University was allocated TRY 4,193,799 in funding over 36 months. Assistant Professor Fatih Kahraman and Assistant Professor Binnur Kurt, faculty members in the Department of Artificial Intelligence Engineering within the Faculty of Engineering and Natural Sciences, assumed leadership in developing the project and consortium. Their involvement connects academic expertise with a collaborative industrial research and development programme focused on hydrogen technologies.

The project supports SDG 7: Affordable and Clean Energy through its focus on hydrogen production, storage and energy applications. Developing these areas within a shared ecosystem can help address the technological connections needed to move hydrogen from production to practical use. Its relevance to clean energy depends on the production pathways and energy sources employed, while research across the hydrogen value chain can inform the development of more sustainable energy solutions.

The project also supports SDG 9: Industry, Innovation and Infrastructure through collaborative technology and product development, and SDG 17: Partnerships for the Goals through cooperation between industry, the University and academic entrepreneurs. By combining complementary expertise within a consortium, the initiative provides a framework for translating research into potential industrial applications relevant to the green transformation of energy and transport.

Türkiye's Climate Future: From Legislation to Reporting—An Interdisciplinary Workshop at Bahçeşehir University



In 2025, Bahçeşehir University's Faculty of Economics, Administrative and Social Sciences hosted the workshop "Türkiye's Climate Future: From Legislation to Reporting" at its Beşiktaş South Campus. Bringing together academics, practitioners, legal specialists, finance professionals and students, the programme examined climate legislation in Türkiye and internationally, followed by climate-related disclosures, reporting and assurance, including Turkish practices presented by PwC Türkiye. The workshop connected the legal foundations of climate action with the institutional processes needed to communicate and assess climate-related responsibilities.

The workshop contributed primarily to SDG 13: Climate Action by examining how legislation, corporate disclosures and assurance processes can support responses to climate change. Its first panel addressed the content, effects and criticisms of climate laws, creating space to assess the relationship between legal commitments and implementation. The reporting and assurance panel complemented this perspective by considering how organisations communicate climate-related information and how its credibility can be evaluated. Together, these themes supported understanding of the legal, economic and institutional dimensions of climate action.

The programme also provided a relevant framework for SDG 6: Clean Water and Sanitation. Climate-related legal obligations and disclosures offer ways to consider water scarcity, dependence on water resources and risks to business continuity. Within this framework, water management can be understood as an organisational responsibility with implications for climate resilience. The workshop's combination of legal and reporting perspectives is therefore relevant to understanding how water-related risks and resource-management practices can become more visible and accountable.

Its connection to SDG 7: Affordable and Clean Energy lies in the relationship between climate regulation, energy use and organisational transition planning. Examining the effects of climate legislation provides a basis for considering how regulatory expectations influence energy efficiency and investment in cleaner energy. Climate-related reporting and assurance, in turn, offer a framework for communicating energy-related emissions and assessing the credibility of transition commitments. These connections position energy decisions within the wider discussion of how institutions respond to climate responsibilities.

The workshop supported SDG 12: Responsible Consumption and Production particularly through its focus on sustainability reporting and assurance. Climate-related disclosures help organisations explain the environmental implications of their activities and provide stakeholders with information for evaluating corporate practices. Discussion of reporting and assurance in Türkiye connected these responsibilities with professional implementation, highlighting the importance of credible information and scrutiny. This emphasis supports more transparent business practices and accountability for the environmental consequences of production and resource use.



TÜRKİYE'NİN İKLİM GELECEĞİ
"FARKLI BOYUTLARI İLE YASADAN RAPORLAMAYA"

Bahçeşehir Üniversitesi İktisadi, İdari ve Sosyal Bilimler Fakültesi Ev Sahipliğinde

14 Kasım 2025, Cuma
Bahçeşehir Üniversitesi, Beşiktaş Güney Kampüsü – BKONF Salonu

İklim değişikliğiyle mücadele, yalnızca çevresel değil, aynı zamanda ekonomik, hukuksal ve kurumsal bir dönüşüm gerektirmektedir. Türkiye'nin İklim Yasası gündemdeki yerini korurken, bu çalıştay; yasa taslağının içeriğini, uygulamadaki olası etkilerini ve sürdürülebilirlik raporlamasıyla olan ilişkisini farklı disiplinlerden uzmanlarla tartışmayı amaçlamaktadır. Çalıştay; akademisyenleri, uygulayıcıları, hukukçuları, finans uzmanlarını ve öğrencileri bir araya getirerek Türkiye'nin iklim yasası sürecine disiplinler arası bir bakış kazandırmayı hedeflemektedir.

Katılım koşulları ve kayıt için: www.modav.org.tr

PROGRAM

	Açılış Konuşmaları
09:15 - 10:15	• **Prof. Dr. Hümeyra Adıgüzel** – Dekan, BAU İİSBF • **Erol Demirel** – İSMMMO Başkanı • **Prof. Dr. Kadir Gürdal** – MODAV Başkanı • **Prof. Dr. Ömer Lalik** – MODAV İstanbul Şube Başkanı
10:15 - 10:30	Kahve Molası
10:30 - 12:30	**Panel I: Dünyada ve Türkiye'de İklim Yasası – İçeriği, Etkileri ve Eleştiriler** **Moderatör: Cem Seymen -** Gazeteci, Televizyon Programcısı • **Prof. Dr. Levent Kurnaz** Boğaziçi Üniversitesi, İklim Değişikliği ve Politikaları Uygulama ve Araştırma Merkezi Müdürü) • **Prof. Dr. Mehmet Şişman** Marmara Üniversitesi Öğretim Üyesi • **Dr. Öğr. Üyesi Serkan Köybaşı** Bahçeşehir Üniversitesi, Anayasa Hukuku ABD Başkanı, Hayvan ve Doğa Hukuku Lab. Dir.

Green Constitutionalism against Climate Change: A Book by Bahçeşehir University Academic Serkan Köybaşı



Published in 2025, Bahçeşehir University academic Serkan Köybaşı's book İklim Değişikliğine Karşı Yeşil Anayasalcılık (Green Constitutionalism against Climate Change) examines the relationship between the climate crisis and contemporary constitutional, political and economic structures. It explores the transition from human-centred to nature-centred legal systems, identifying sustainability, climate justice, rethinking rights and an economic model compatible with nature as foundations of green constitutionalism. The book also examines international and national judicial decisions concerning climate change and the role of high courts in advancing ecological responsibilities.

The publication contributes primarily to SDG 13: Climate Action by examining how constitutional principles and judicial mechanisms can support responses to the climate crisis. Köybaşı argues that effective climate action requires scrutiny of the legal and economic structures underlying environmental degradation. By bringing together climate justice, sustainability and climate litigation, the book contributes to academic understanding of how legal systems can strengthen accountability for climate-related responsibilities.

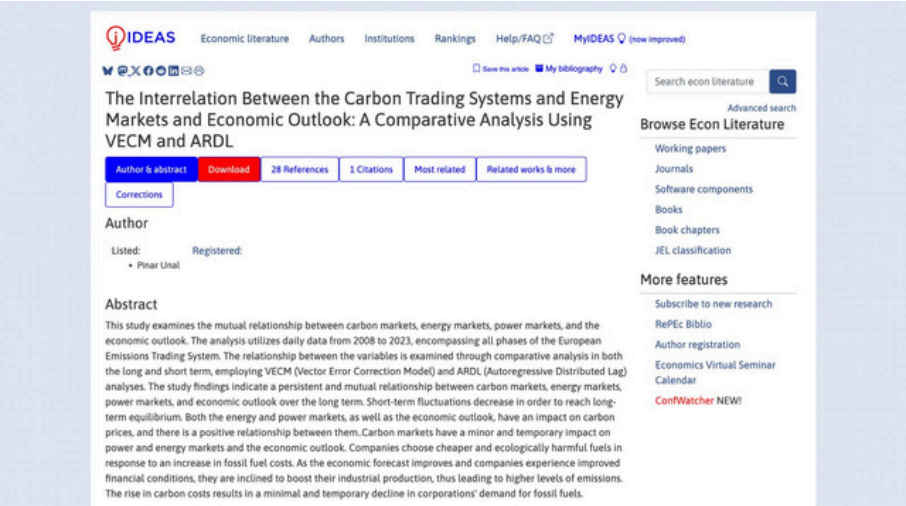
The book's nature-centred constitutional perspective also provides a conceptual connection to SDG 6: Clean Water and Sanitation. Its discussion of sustainability and the reconsideration of rights offers a basis for understanding the protection of water resources as a legal and ecological responsibility. From this perspective, safeguarding freshwater ecosystems and considering the water needs of present and future generations become relevant applications of a constitutional order that recognises humanity's dependence on nature.

Its relevance to SDG 7: Affordable and Clean Energy lies in its examination of the relationship between economic structures, legal systems and climate change. The proposed shift towards an economic model compatible with nature provides a framework for considering the legal responsibilities surrounding energy production and consumption. Applied to the energy sector, this perspective can inform discussion of cleaner energy transitions and the need to align energy decisions with climate justice and long-term ecological sustainability.

The publication relates to SDG 12: Responsible Consumption and Production through its critical examination of the economic arrangements underlying ecological harm. Its emphasis on sustainability and an economic model compatible with nature provides a foundation for questioning resource-intensive production and consumption practices. By examining how constitutional principles might constrain environmentally damaging economic power, the book contributes to debate on the legal conditions needed for more responsible resource use and economic activity.

The book also contributes directly to SDG 16: Peace, Justice and Strong Institutions through its focus on constitutionalism, the rule of law and the role of high courts in climate governance. Its analysis of international and national climate judgments examines how judicial institutions can interpret environmental responsibilities and scrutinise the exercise of power. By placing climate justice within constitutional debate, the publication supports scholarly discussion of accountable institutions and legal mechanisms capable of addressing the climate crisis.

The Interrelation Between the Carbon Trading Systems and Energy Markets and Economic Outlook: A Comparative Analysis Using VECM and ARDL

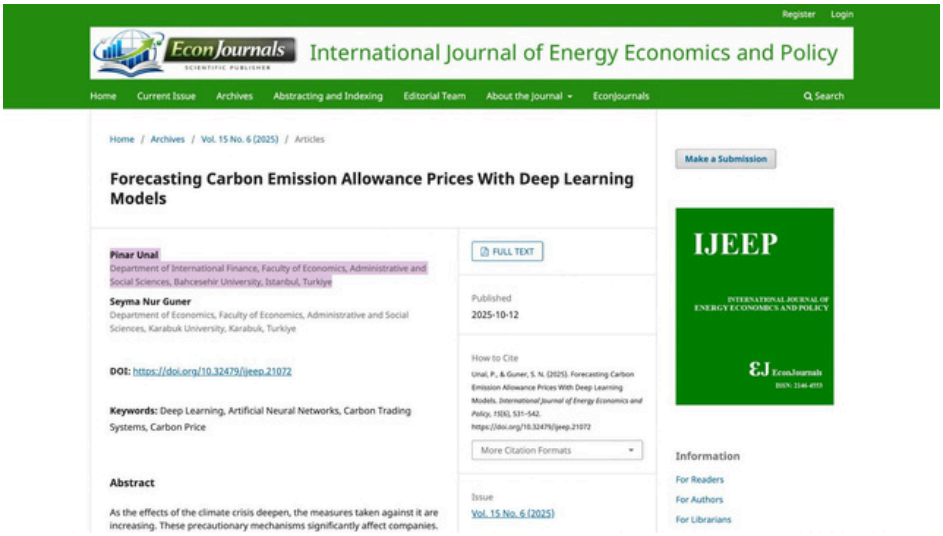


In 2025, Dr. Pınar Ünal, a research assistant at Bahçeşehir University, contributed to this study examining the relationships between carbon markets, energy markets, electricity markets and the economic outlook. Using daily data from 2008 to 2023 covering the European Union Emissions Trading System's phases during that period, the research compares long- and short-term dynamics through Vector Error Correction Model (VECM) and Autoregressive Distributed Lag (ARDL) analyses.

The findings identify a persistent long-term relationship between these markets and the economic outlook, with short-term deviations adjusting towards equilibrium. Energy and electricity market conditions, together with the economic outlook, influence carbon prices, while the effects of carbon markets on the other variables are comparatively limited and temporary. The study also finds that higher fossil fuel costs can encourage companies to substitute cheaper, more environmentally harmful fuels, while improved economic conditions can increase industrial production and emissions. Rising carbon costs produce only a small and temporary reduction in corporate demand for fossil fuels.

The research contributes to SDG 7: Affordable and Clean Energy by providing evidence on the economic incentives influencing energy choices and the transition towards cleaner energy systems. Its findings highlight the limitations of carbon pricing alone in generating sustained changes in fossil fuel demand, informing discussion of complementary approaches to renewable energy development and energy efficiency. The study also supports SDG 13: Climate Action by examining the interaction between emissions trading, energy consumption and economic activity, offering insights relevant to the design of policies for a low-carbon economy.

Forecasting Carbon Emission Allowance Prices with Deep Learning Models



In 2025, Dr. Pınar Ünal, a research assistant at Bahçeşehir University, contributed to a study on forecasting European Union Emissions Allowance (EUA) prices using deep learning models. The research addresses an important challenge in the transition towards a low-carbon economy: understanding and anticipating the financial implications of greenhouse gas emissions. It examines the importance of forecasting carbon costs for companies operating under emissions trading systems, where the price of carbon allowances can influence energy-related expenditures, investment planning, and decisions concerning emissions reduction.

The study uses energy and electricity market prices, together with economic indicators, to capture factors influencing carbon allowance prices. By examining the relationship between carbon markets, energy prices, and wider economic conditions, the research provides an analytical perspective on the economic mechanisms associated with decarbonisation and energy transition.

The study compares two deep learning approaches: feedforward neural networks (FFNN) and Elman recurrent neural networks. Both models achieved strong predictive accuracy, with different advantages. The FFNN model produced more stable results with lower variance, while the Elman model offered advantages in short-term forecasting. These findings demonstrate the potential of deep learning to capture complex relationships between carbon prices, energy markets, and economic conditions.

The research contributes to SDG 7 (Affordable and Clean Energy) by developing analytical approaches that can improve understanding of carbon-related costs within energy markets. As carbon pricing increases the financial significance of greenhouse gas emissions, the ability to anticipate allowance price movements can provide useful information for evaluating the relative costs of carbon-intensive energy activities and lower-emission alternatives.

More reliable carbon price forecasting can support financial planning and investment assessments concerning renewable energy technologies, energy efficiency improvements, and cleaner production processes. By helping market participants better understand potential carbon-cost exposure, the research provides information relevant to decisions about long-term energy investments and the economic transition towards less carbon-intensive energy systems.

The study is particularly relevant to SDG Target 7.2, which seeks to increase the share of renewable energy in the global energy mix, and SDG Target 7.3, which focuses on improving energy efficiency. Although the research does not directly develop renewable energy technologies or measure improvements in energy efficiency, its forecasting methodology can inform the economic analysis of investments and operational decisions associated with these objectives.

The study has a particularly strong connection with SDG 13 (Climate Action) through its focus on carbon pricing, an important policy instrument used to create economic incentives for reducing greenhouse gas emissions.

Emissions trading systems assign a financial cost to covered emissions, making carbon prices an important consideration in corporate environmental strategies and investment decisions. However, fluctuations in allowance prices can create uncertainty for businesses seeking to evaluate future compliance costs, plan emissions-reduction investments, and manage their exposure to carbon markets.

By applying deep learning techniques to forecast EUA prices, the research contributes to the development of analytical tools that can help businesses and market participants better understand these uncertainties. Improved forecasting capabilities may support more informed carbon-cost planning, assessment of decarbonisation investments, and evaluation of the financial implications of emissions-related policies.

The research is relevant to the broader objectives of SDG Target 13.2, which emphasises the integration of climate change measures into policies, strategies, and planning. Its contribution lies in strengthening the analytical evidence available for climate-related economic and business decisions, rather than directly measuring or achieving greenhouse gas emissions reductions.

The study also supports SDG 9 (Industry, Innovation and Infrastructure) through its application of artificial intelligence and advanced computational methods to energy and environmental market analysis. By comparing neural network architectures and identifying their respective forecasting advantages, the research demonstrates how data-driven innovation can contribute

to the development of more sophisticated analytical tools for industries operating within increasingly carbon-constrained economic environments.

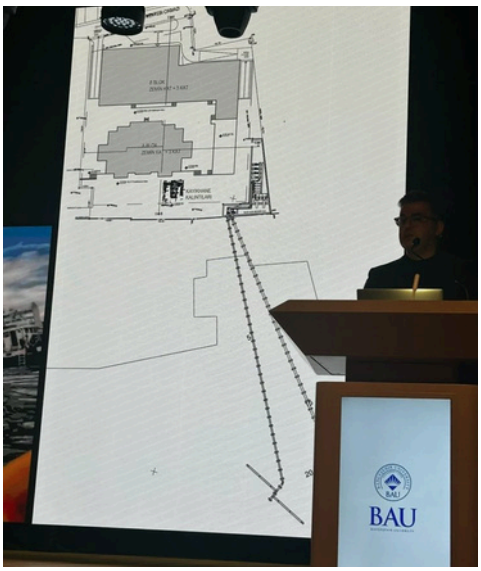
Overall, the study illustrates the potential of artificial intelligence to connect financial forecasting with the challenges of energy transition and climate action. By improving analytical understanding of carbon allowance price movements, it contributes research that can inform cleaner energy investment assessments, corporate carbon-cost management, and climate-related economic planning, reinforcing the complementary objectives of SDG 7 and SDG 13.

Supporting Energy Efficiency through a Seawater-Source Heat Pump System at Bahçeşehir University

Bahçeşehir University has incorporated a seawater-source heat pump system into its campus infrastructure, supporting its commitment to energy efficiency and more sustainable building operations. The system uses seawater as a thermal resource for building heating and cooling, demonstrating how locally available natural resources can inform campus energy solutions.

As outlined in the technical presentation, the system draws on seawater from approximately 100 metres offshore and a depth of 25 metres, with water temperatures ranging between 10 and 20°C. This approach enables the use of the sea's thermal energy in meeting building heating and cooling needs, supporting an energy-conscious approach to indoor climate management.

The initiative contributes to SDG 7: Affordable and Clean Energy through the integration of heat pump technology and the use of an ambient thermal resource in campus operations. By incorporating this system into its facilities, Bahçeşehir University demonstrates a practical commitment to improving the sustainability of its energy infrastructure and advancing more efficient approaches to building heating and cooling.





Advancing Clean and Sustainable Energy: Bahçeşehir University's Research Contributions to SDG 7

According to SciVal data, Bahçeşehir University produced 203 publications classified under SDG 7: Affordable and Clean Energy during the 2021–2025 period. These publications achieved a Field-Weighted Citation Impact (FWCI) of 1.65, indicating citation performance 65% above the global average for comparable publications, adjusted for subject field, publication year and publication type.

The research output received 3,920 citations and recorded 9,767 views, reflecting its visibility and uptake within the academic community. These indicators highlight BAU's contribution to the scientific knowledge base relevant to clean energy, energy efficiency and sustainable energy systems, providing resources for further investigation and informed discussion of the energy transition.

By contributing to the knowledge base relevant to sustainable energy, Bahçeşehir University supports informed discussion of the technological, environmental and economic dimensions of the energy transition. Its publications provide resources for further scientific investigation and opportunities for knowledge exchange among researchers, industry professionals and policymakers. Research in this field can help inform the development of energy technologies, the evaluation of energy practices and the consideration of policies that support more sustainable energy systems. This sustained scholarly activity demonstrates BAU's commitment to advancing SDG 7 through scientific inquiry, interdisciplinary learning and the sharing of research findings.

The tables below were compiled using publication data obtained from SciVal and present Bahçeşehir University's research outputs associated with SDG 7 during the 2021–2025 period. They include the publication year, publication title, author information and journal name, providing a structured overview of the University's contributions. These records complement the publication total by identifying the individual research outputs and offering readers a basis for exploring their subjects, authorship and publication venues in greater detail.

SDG 7: Affordable and Clean Energy — BAU Publications (2021–2025)

203 publications | Source: Scopus / SciVal; data updated: 25 October 2026. Includes journal articles and other publication types.

No.	Year	Publication Title	Authors	Journal / Publication Source
1	2021	3D Analysis of a multipurpose modular reactor for small energy production	Şahin, S.; Şarer, B.	International Journal of Energy Research
2	2021	A weighted multi-objective optimisation approach to improve based facade aperture sizes in terms of energy, thermal comfort and daylight usage	Yılmaz, Y.; Yılmaz, B.Ç.	Journal of Building Physics
3	2021	Adapting sustainability and energy efficiency principles to architectural education: A conceptual model proposal for the design studio sequence	Ceylan, S.	E3S Web of Conferences
4	2021	Agro Wastes/Natural Fibers Reinforcement in Concrete and Their Applications	Verma, D.; Sanal, I.	Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications: Volumes 1-4
5	2021	Daylight Saving Time policy and energy consumption	Küfeoğlu, S.; Üçler; Eskicioğlu, F.; Öztürk, E.B.; Chen, H.	Energy Reports
6	2021	Disrupting the power grid via EV charging: The impact of the SMS Phishing attacks	Soykan, E.U.; Bağrıyanık, M.; Soykan, G.	Sustainable Energy, Grids and Networks
7	2021	Generation-IV reactors and nuclear hydrogen production	Şahin, S.; Şahin, H.M.	International Journal of Hydrogen Energy
8	2021	Green synthesis, analysis and characterization of XZnFe2O3 (X=Mg,Co,Ni) quatemary alloys nanoparticles and their potential application for optoelectronics and antibacterial	Al-Douri, A.T.; Gdoura, R.; Al-Douri, Y.; Bouhemadou, A.; El-Rehim, A.F.A.	Journal of Materials Research and Technology
9	2021	Life cycle cost optimization of building façade: A social housing case	Yılmaz, Y.; Yılmaz, B.Ç.	Indoor and Built Environment
10	2021	Minimizing Cogging Torque in Permanent Magnet Synchronous Generators for Small Wind Turbine Applications	Sayed, A.E.; Erturk, E.	International Journal of Renewable Energy Research

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203 publications | Source: Scopus / SciVal; data updated: 25 October 2026. Includes journal articles and other publication types.

No.	Year	Publication Title	Authors	Journal / Publication Source
11	2021	Physical layer authentication for extending battery life	Ayyildiz, C.; Cetin, R.; Khodzhaev, Z.; Kocak, T.; Soyak, E.G.; Gungor, V.C.; Kurt, G.K.	Ad Hoc Networks
12	2021	Selection of solar tracking system using extended TOPSIS technique with interval type-2 pythagorean fuzzy numbers	Umer, R.; Touqeer, M.; Omar, A.H.; Ahmadian, A.; Salahshour, S.; Ferrara, M.	Optimization and Engineering
13	2021	Sizing of an Islanded Wind-Solar-Battery Hybrid Power System for a Zero-Energy House in Afyon Turkey	Yazdı, M.S.; Karkani, S.B.; Erturk, E.	International Journal of Renewable Energy Research
14	2021	Study on the fusion reactor performance with different materials and nuclear waste actinides	Şahin, S.; Şahin, H.M.; Şahiner, H.; Tunç, G.	International Journal of Energy Research
15	2021	The effect of Cu/In molar ratio on the analysis and characterization of CuInS2 nanostructures	Alalousi, M.A.; Abu Odeh, A.; Ibraheam, A.S.; Al-Douri, Y.	Emergent Materials
16	2022	A choice experiment on preferences for electric and hybrid cars in Istanbul	Inci, E.; Tatar Taspinar, Z.; Ulengin, B.	Transportation Research Part D: Transport and Environment
17	2022	A comprehensive review of recent advances in renewable-based drying technologies for a sustainable future	Acar, C.; Dincer, I.; Mujumdar, A.	Drying Technology
18	2022	Chemical properties of quantum dots	Taie, W.A.M.A.; Odeh, A.A.; Al-Douri, Y.	Graphene, Nanotubes and Quantum Dots-Based Nanotechnology: Fundamentals and Applications
19	2022	Comparative fuel cell sustainability assessment with a novel approach	Acar, C.; Beskese, A.; Temur, G.T.	International Journal of Hydrogen Energy
20	2022	Current Status and Future Prospects of Power-To-Hydrogen Towards 100% Renewable Energy	Acar, C.	Lecture Notes in Energy
21	2022	Density functional theory screening of some fundamental physical properties of Cs2InSbCl6 and Cs2InBiCl6 double perovskites	Alnujaim, S.; Bouhemadou, A.; Chegaar, M.; Guechi, A.; Bin-Omran, S.; Khenata, R.; Al-Douri, Y.; Yang, W.; Lu, H.	European Physical Journal B

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No.	Year	Publication Title	Authors	Journal / Publication Source
22	2022	Desing and simulation of an autonomous 12.6 kW solar plant in the Algeria's M'sila region using PVsyst software	Salmi, M.; Baci, A.B.; Inc, M.; Menni, Y.; Lorenzini, G.; Al-Douri, Y.	Optik
23	2022	FUNDAMENTALS OF SOLAR CELLS	Ling, J.; Wali, Q.; Al-Douri, Y.; Jose, R.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
24	2022	Graphene and optoelectronics	Abu Odeh, A.; Al Taie, W.A.M.; Al-Douri, Y.	Graphene, Nanotubes and Quantum Dots-Based Nanotechnology: Fundamentals and Applications
25	2022	Industrial applications of nanotubes	Basheer, A.O.; Al-Douri, Y.	Graphene, Nanotubes and Quantum Dots-Based Nanotechnology: Fundamentals and Applications
26	2022	INFORMATION AND COMMUNICATIONS TECHNOLOGY AND RENEWABLE ENERGY MONITORING	Alani, O.Y.; Qasim, A.Y.; Al-Douri, Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
27	2022	Mathematical modeling of the energy consumption problem	Ashyralyev, A.; Urun, M.; Parmaksizoglu, I.C.	Bulletin of the Karaganda University. Mathematics Series
28	2022	Nanostructured manganese oxide on carbon for water oxidation: New findings and challenges	Salimi, S.; Zand, Z.; Hołyńska, M.; Allakhverdiev, S.I.; Najafpour, M.M.	International Journal of Hydrogen Energy
29	2022	Optical investigations of Cu2CdSnS4 quatemary alloy nanostructure for indoor optical wireless communications	Fassi, B.; Driz, S.; Al-Douri, Y.; Ameri, M.; Abd El-Rehim, A.F.	Optics Communications
30	2022	Optical properties of quantum dots	Al-Douri, Y.; Jose, R.	Graphene, Nanotubes and Quantum Dots-Based Nanotechnology: Fundamentals and Applications
31	2022	Optimal cost management of the CCHP based data center with district heating and district cooling integration in the presence of different energy tariffs	Keskin, I.; Soykan, G.	Energy Conversion and Management

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No.	Year	Publication Title	Authors	Journal / Publication Source
32	2022	Optimal sizing of an isolated microgrid with electric vehicles using stochastic programming	Soykan, G.; Er, G.; Canakoglu, E.	Sustainable Energy, Grids and Networks
33	2022	Re-considering the energy efficient retrofitting approach to question cost-optimality and nZEB under COVID-19 measures	Yılmaz, B.Ç.; Yılmaz, Y.	Building and Environment
34	2022	RENEWABLE ENERGY ANALYSIS AND RESOURCES	Odeh, A.A.; Al Taie, W.A.M.; Al-Douri, Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
35	2022	RENEWABLE ENERGY AND NANOTECHNOLOGY	Al-Douri, Y.; Jose, R.; Qasim, A.Y.; Alani, O.Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
36	2022	RENEWABLE ENERGY IN DEVELOPING COUNTRIES	Al-Douri, Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
37	2022	RENEWABLE ENERGY MANAGEMENT AND ECONOMICS	Al-Douri, Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
38	2022	Renewable Energy: Analysis, Resources, Applications, Management, and Policy	Al-Douri, Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
39	2022	Selection criteria and ranking for sustainable hydrogen production options	Acar, C.; Dincer, I.	International Journal of Hydrogen Energy
40	2022	Synthesis of NiFe2O4/TiO2-Ag+ S-scheme photocatalysts by a novel complex-assisted vapor thermal method for photocatalytic hydrogen production	Firtina-Ertis, I.; Kerkez-Kuyumcu, Ö.	Journal of Photochemistry and Photobiology A: Chemistry
41	2022	The Role of Organic Products in Preventing the Climate Crisis	Vardarlıer, P.; Girgin, N.	Contributions to Management Science
42	2022	Thermodynamic and electrochemical assessment of an alkaline electrolyzer (AE) at different	Firtina-Ertis, I.	Journal of Environmental Chemical Engineering

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No.	Year	Publication Title	Authors	Journal / Publication Source
43	2022	Tracking optical properties of ZnO:Mg thin films: Experimental and first principles calculations	Matur, U.C.; Duru, I.P.; Akcan, D.	Ceramics International
44	2022	WIND ENERGY	Y. Qasim, A.; Al-Douri, Y.; Alani, O.Y.	Renewable Energy: Analysis, Resources, Applications, Management, and Policy
45	2023	A Privacy-Preserving Scheme for Smart Grid Using Trusted Execution Environment	Akgun, M.; Soykan, E.U.; Soykan, G.	IEEE Access
46	2023	A robust scheme for Caputo variable-order time-fractional diffusion-type equations	Sadri, K.; Hosseini, K.; Baleanu, D.; Salahshour, S.; Hinçal, E.	Journal of Thermal Analysis and Calorimetry
47	2023	An Investigation on the Soft Computing Method Performance of the Optimizing Energy Consumption Cost	Nemer, M.S.M.; Hussain, A.; Alanssari, A.I.; Talib, S.H.; Jabbar, K.A.; Abdullah, S.J.	Majlesi Journal of Electrical Engineering
48	2023	CAN DIFFERENT POLYMERIZATION TIMES AFFECT THE SURFACE MICROHARDNESS, WATER SORPTION, AND WATER SOLUBILITY OF FLOWABLE COMPOSITE RESINS?	Kazak, M.; Koymen, S.S.; Donmez, N.	Bioscience Journal
49	2023	Co-simulation-based conventional exergy evaluation of a hybrid energy generation-vanadium redox flow battery-air source heat pump system	Yesilyurt, M.S.; Ozcan, H.G.; Yavasoglu, H.A.	Energy
50	2023	Decision support model for PV integrated shading system: Office building case	Yılmaz, B.Ç.; Yılmaz, Y.	Energy Reports
51	2023	Distribution grid electrical performance and emission analysis of combined cooling, heating and power (CCHP)-photovoltaic (PV)-based data center and residential customers	Keskin, I.; Soykan, G.	Journal of Cleaner Production
52	2023	Energy, exergy, economic, environmental and sustainability (4ES) analyses of a wastewater source heat pump system for district heating applications based on real operational data	Ozcan, H.G.; Hepbasli, A.; Abusoglu, A.; Anvari-Moghaddam, A.	Sustainable Energy Technologies and Assessments

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No.	Year	Publication Title	Authors	Journal / Publication Source
53	2023	Global tourism, climate change and energy sustainability: assessing carbon reduction mitigating measures from the aviation industry	Leal Filho, W.; Ng, A.W.; Sharifi, A.; Janová, J.; Özuyar, P.G.; Hemani, C.; Heyes, G.; Njau, D.; Rampasso, I.	Sustainability Science
54	2023	Microalgae as a key tool in achieving carbon neutrality for bioproduct production	Sadvakasova, A.K.; Kossalbayev, B.D.; Bauenova, M.O.; Balouch, H.; Leong, Y.K.; Zayadan, B.K.; Huang, Z.; Alharby, H.F.; Tomo, T.; Chang, J.-S.; Allakhverdiev, S.I.	Algal Research
55	2023	Nanostructured manganese oxide on fullerene soot for water oxidation under neutral conditions	Salimi, S.; Akbari, N.; Zand, Z.; Holyńska, M.; Aleshkevych, P.; Allakhverdiev, S.I.; Najafpour, M.M.	International Journal of Hydrogen Energy
56	2023	New cyanobacterial strains for biohydrogen production	Bozieva, A.M.; Khasimov, M.K.; Voloshin, R.A.; Sinetova, M.A.; Kupriyanova, E.V.; Zharmukhamedov, S.K.; Dunikov, D.O.; Tsygankov, A.A.; Tomo, T.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
57	2023	Performance analysis of a stand-alone integrated solar hydrogen energy system for zero energy buildings	Acar, C.; Erturk, E.; Firtina-Ertis, I.	International Journal of Hydrogen Energy
58	2023	Photosynthetic microbial fuel cells: practical applications of electron transfer chains	Voloshin, R.A.; Bozieva, A.M.; Bruce, B.D.; Allakhverdiev, S.I.	Russian Chemical Reviews
59	2023	Physical and electrical characterization of silicon suboxide seed layer	Kalem, S.	Proceedings of SPIE - The International Society for Optical Engineering
60	2023	Prospecting the biofuel potential of new microalgae isolates	Balouch, H.; Zayadan, B.K.; Sadvakasova, A.K.; Kossalbayev, B.D.; Bolatkhan, K.; Gencer, D.; Civelek, D.; Demirbag, Z.; Alharby, H.F.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
61	2023	Reliability, availability, and life-cycle cost (LCC) analysis of combined cooling, heating and power (CCHP) integration to data centers considering electricity and cooling supplies	Keskin, I.; Soykan, G.	Energy Conversion and Management

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No.	Year	Publication Title	Authors	Journal / Publication Source
62	2023	Screening and optimisation of hydrogen production by newly isolated nitrogen-fixing cyanobacterial strains	Kamshybayeva, G.K.; Kossalbayev, B.D.; Sadvakasova, A.K.; Bauenova, M.O.; Zayadan, B.K.; Bozieva, A.M.; Alharby, H.F.; Tomo, T.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
63	2023	Solar Energy Investment Valuation With Intuitionistic Fuzzy Trinomial Lattice Real Option Model	Ersen, H.Y.; Tas, O.; Ugurlu, U.	IEEE Transactions on Engineering Management
64	2023	The green synthesis of copper oxide nanoparticles by using aloe vera extract and effects on neuroblastoma cell line	Bagci, C.	TIPTEKNO 2023 - Medical Technologies Congress, Proceedings
65	2023	Time-resolved radiative recombination in black silicon	Kalem, S.	Journal of Materials Science: Materials in Electronics
66	2023	Understanding Rare Earth Elements as Critical Raw Materials	Filho, W.L.; Kotter, R.; Özuyar, P.G.; Abubakar, I.R.; Eustachio, J.H.P.P.; Matandirotya, N.R.	Sustainability (Switzerland)
67	2024	11th International Conference on "Photosynthesis and Hydrogen Energy Research for Sustainability"	Subramanyam, R.; Tomo, T.; Allakhverdiev, S.I.	Photosynthesis Research
68	2024	A comparison of the effects of incremental and snowplow techniques on the mechanical properties of composite restorations	Ölçer Us, Y.; Aydınoğlu, A.; Erşahan, Ş.; Erdem Hepşenoğlu, Y.; Sağır, K.; Üşümez, A.	Australian Dental Journal
69	2024	A comprehensive review of a building-integrated photovoltaic system (BIPV)	Chen, L.; Baghoolizadeh, M.; Basem, A.; Ali, S.H.; Ruhani, B.; Sultan, A.J.; Salahshour, S.; Alizadeh, A.	International Communications in Heat and Mass Transfer
70	2024	A multi-criteria decision-making method for thermal insulation material selection in nZEB level questioned affordable multifamily housings	Yilmaz, B.Ç.; Acun Özgünler, S.; Yilmaz, Y.	Journal of Building Physics
71	2024	A new energy-efficient design for quantum-based multiplier for nano-scale devices in internet of things	Ahmadpour, S.-S.; Nooraliahzadeh, M.; Al-Khafaji, H.M.R.; Darbandi, M.; Jafari Navimipour, N.; Javadi, B.; Ain, N.U.; Hosseinzadeh, M.; Yalcin, S.	Computers and Electrical Engineering

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No.	Year	Publication Title	Authors	Journal / Publication Source
72	2024	A new service composition method in the cloud-based Internet of things environment using a grey wolf optimization algorithm and MapReduce framework	Vakili, A.; Al-Khafaji, H.M.R.; Darbandi, M.; Heidari, A.; Jafari Navimipour, N.; Unal, M.	Concurrency and Computation: Practice and Experience
73	2024	A numerical approach to exergy-based sustainability and environmental assessments of solar energy-powered district cooling systems using actual operational data	Ozcan, H.G.; Hepbasli, A.; Abusoglu, A.	Process Safety and Environmental Protection
74	2024	A sophisticated decision paradigm for the assessment of hydrogen storage technologies for mobility applications	Brainy, J.R.V.J.; Narayanamoorthy, S.; Pragathi, S.; Salahshour, S.; Ahmadian, A.; Kang, D.	Journal of Energy Storage
75	2024	An enhanced fuzzy IDOCRIW-COCOSO multi-attribute decision making algorithm for decisive electric vehicle battery recycling method	Parthasarathy, T.N.; Narayanamoorthy, S.; Thilagasree, C.S.; Marimuthu, P.R.; Salahshour, S.; Ferrara, M.; Ahmadian, A.	Results in Engineering
76	2024	An evaluation of the metal hydride hydrogen extraction efficiency from biological gas streams	Kazakov, A.N.; Dunikov, D.O.; Romanov, I.A.; Eronin, A.A.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
77	2024	ANALYSIS OF THE RELATIVE PERFORMANCE OF CLEAN ENERGY STOCK INDICES	Berk, N.; Yildirtan, D.C.; Sarli, S.	WIT Transactions on Ecology and the Environment
78	2024	Analyzing the Dynamics: Asymmetric Effects of Economic Growth, Technological Innovation, and Renewable Energy on Carbon Emissions in Africa	Teklie, D.K.; Doğan, B.	International Journal of Energy Economics and Policy
79	2024	Artificial neural network hyperparameters optimization for predicting the thermal conductivity of MXene/graphene nanofluids	Shang, Y.; Hammoodi, K.A.; Alizadeh, A.; Sharma, K.; jasim, D.J.; Rajab, H.; Ahmed, M.; Kassim, M.; Kassim, M.; Maleki, H.; Salahshour, S.	Journal of the Taiwan Institute of Chemical Engineers
80	2024	Battery thermal management system by employing different phase change materials with SWCNT nanoparticles to obtain better battery cooling performance	Ren, J.; Rasheed, R.H.; Bagheritabar, M.; Abdul-Redha, H.K.; Al-Bahrani, M.; Singh, S.; Salahshour, S.; Toghraie, D.	Case Studies in Thermal Engineering
81	2024	Biotechnological production of hydrogen: Design features of photobioreactors and	Kossalbayev, B.D.; Yilmaz, G.; Sadvakasova, A.K.; Zayadan, B.K.;	International Journal of Hydrogen Energy

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81	2024	Biotechnological production of hydrogen: Design features of photobioreactors and improvement of conditions for cultivating cyanobacteria	Kossalbayev, B.D.; Yilmaz, G.; Sadvakasova, A.K.; Zayadan, B.K.; Belkozhayev, A.M.; Kamshybayeva, G.K.; Sainova, G.A.; Bozieva, A.M.; Alharby, H.F.; Tomo, T.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
82	2024	Catalytic enhancement of graphene oxide by trace molybdenum oxide nanoparticles doping: Optimized electrocatalyst for green hydrogen production	Alotaibi, N.H.; Shah, J.H.; Nisa, M.U.; Mohammad, S.; Günhan Özcan, H.; Abid, A.G.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
83	2024	Combining neutral scalar and isothermal Shan-Chen lattice Boltzmann method to simulate droplet placement on a wall in isothermal and non-isothermal states	Liu, Y.; Jasim, D.J.; Sajadi, S.M.; Nasajpour-Esfahani, N.; Salahshour, S.; Zarringhalm, M.; Rahmani, A.	Journal of the Taiwan Institute of Chemical Engineers
84	2024	Comparison of Water Sorption and Water Solubility Properties of Current Restorative Materials with Different Contents	Kazak, M.; Toz Akalin, T.; Esen, F.	European Journal of Dentistry
85	2024	Controlled fabrication of various nanostructures iron-based tellurides as highly performed oxygen evolution reaction	Albaqami, M.D.; Nisa, M.U.; Manzoor, S.; Shah, J.H.; Mohammad, S.; Yalcin, S.; Abid, A.G.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
86	2024	Decomposition of a manganese complex loaded on TiO2 nanoparticles under photochemical reaction	Madadkhani, S.; Nandy, S.; Aleshkevych, P.; Chae, K.H.; Allakhverdiev, S.I.; Najafpour, M.M.	International Journal of Hydrogen Energy
87	2024	Design an integrated strategic resource planning to analyze the development of renewable energy sources	Sadeghi, H.; Shami, H.O.; Moazzami, M.; Ahmadi, G.; Toghraie, D.; Rezaei, M.; Dolatshahi, M.; Salahshour, S.	Energy Strategy Reviews
88	2024	Designing an optimal multi-energy system with fast charging and hydrogen refueling station under uncertainties	Er, G.; Soykan, G.; Canakoglu, E.	Sustainable Energy, Grids and Networks
89	2024	Developing Preservice Science Teachers' Sense of Place Through Place-Based Socioscientific Issues Instruction	Ozturk, N.; Tuncay-Yüksel, B.	Contemporary Trends and Issues in Science Education
90	2024	Dynamic analysis and multi-objective optimization of solar and hydrogen energy-based	Soyturk, G.; Cetinkaya, S.A.; Aslani Yekta, M.; Kheiri Joghan, M.M.;	International Journal of Hydrogen Energy

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91	2024	Effect of rectangular, triangular, and semi-circular hybrid nano phase change material chambers under permanent magnetic field on the stepped solar still efficiency: An experimental study	Toosi, S.S.A.; Goshayeshi, H.R.; Zahmatkesh, I.; Chaer, I.; Salahshour, S.; Toghraie, D.	Case Studies in Thermal Engineering
92	2024	Effect of the photosynthesis inhibitors on hydrogen production by non-heterocyst cyanobacterial strains	Kamshybayeva, G.K.; Kossalbayev, B.D.; Sadvakasova, A.K.; Bauenova, M.O.; Zayadan, B.K.; Krapivina, A.A.; Sainova, G.A.; Alharby, H.F.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
93	2024	Energy Performance Optimisation of a Single Dwelling Archetype Targeted to ZEB in the Earthquake Zone	Yılmaz, Y.; Yılmaz, B.Ç.	Environmental Science and Engineering
94	2024	Energy-Aware 3D Path Planning by Autonomous Ground Vehicle in Wireless Sensor Networks	Gul, O.M.	World Electric Vehicle Journal
95	2024	Enhancing solar energy conversion efficiency: Thermophysical property predicting of MXene/Graphene hybrid nanofluids via bayesian-optimized artificial neural networks	jasim, D.J.; Rajab, H.; Alizadeh, A.; Sharma, K.; Ahmed, M.; Kassim, M.; AbdulAmeer, S.; Alwan, A.A.; Salahshour, S.; Maleki, H.	Results in Engineering
96	2024	Evaluation of the growth process of soot mass due to changes in hydrogen atomic percentage and external heat flux using molecular dynamics simulation	Sun, S.; Ali, A.B.M.; Abdul-Redha, H.K.; Alardhi, S.M.; Ahmad, N.; Abduvalieva, D.; Salahshour, S.; Sabetvand, R.	Case Studies in Thermal Engineering
97	2024	Exploring Usability as a Formative Construct through UMUX: A Multi-Language Approach for Turkish Adaptation	Berkman, M.İ.; Şahin, Ş.	International Journal of Human-Computer Interaction
98	2024	Fabrication of covellite supported spinel oxide CuCo2O4 hybrid nano-composite electrode for efficient overall water splitting	Moazzam Khan, M.; Imran Abbas Shah, S.; Ammar Hassan Shah, M.; Najam-ul-Haq, M.; Alotaibi, N.H.; Mohammad, S.; Zada, I.; Naeem Ashiq, M.; Allakhverdiev, S.I.	Journal of Electroanalytical Chemistry
99	2024	Fabrication of heterojunction electrode based on Fe2O3@CuO-400 nanocomposite constructed for hydrogen production	Alothman, A.A.; Shah, J.H.; Aljadoa, K.A.; Soykan, G.; Yalçin; Abid, A.G.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy

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100	2024	Genetic engineering contribution to developing cyanobacteria-based hydrogen energy to reduce carbon emissions and establish a hydrogen economy	Kamshybayeva, G.K.; Kossalbayev, B.D.; Sadvakasova, A.K.; Kakimova, A.B.; Bauenova, M.O.; Zayadan, B.K.; Lan, C.-W.; Alwasel, S.; Tomo, T.; Chang, J.-S.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
101	2024	Geometrical optimization of solar venetian blinds in residential buildings to improve the economic costs of the building and the visual comfort of the residents using the NSGA-II algorithm	Liu, J.; Baghoolizadeh, M.; Basem, A.; Hamza, H.; Sudhamsu, G.; Al-Musawi, T.J.; Sultan, A.J.; Salahshour, S.; Alizadeh, A.	International Communications in Heat and Mass Transfer
102	2024	Green hydrogen for ammonia production – A case for the Netherlands	Pagani, G.; Hajimolana, Y.; Acar, C.	International Journal of Hydrogen Energy
103	2024	Guest Editorial for the Special Issue on "Photosynthesis and Hydrogen Energy Research for Sustainability"	Allakhverdiev, S.I.	International Journal of Hydrogen Energy
104	2024	Hydrogen energy development in Turkey: Challenges and opportunities	Yilmaz, G.; Sadvakasova, A.K.; Kossalbayev, B.D.; Bauenova, M.O.; Zhamukhamedov, S.K.; Ziyayeva, G.K.; Zaletova, D.E.; Alharby, H.F.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
105	2024	Hydrogen storage solutions for residential heating: A thermodynamic and economic analysis with scale-up potential	Esposito, L.; van der Wiel, M.; Acar, C.	International Journal of Hydrogen Energy
106	2024	Improving the thermal performance of nano-encapsulated phase change material slurry by changing fins configurations in a rectangular cavity	Zhang, L.; Kazemi-Varnamkhasti, H.; Basem, A.; Hamza, H.; Sultan, A.J.; Al-Bahrani, M.; Padilla, C.; Formanova, S.B.; Salahshour, S.; Alizadeh, A.	International Communications in Heat and Mass Transfer
107	2024	In-depth analysis of battery life enhancement in solar-assisted fuel-cell range-extender vehicles	Parlak, B.O.; Yavasoglu, H.A.; Ozcan, H.G.	International Journal of Hydrogen Energy
108	2024	Integrated AHP & TOPSIS methodology using intuitionistic Z-numbers: An application on hydrogen storage technology selection	Haktanır, E.; Kahraman, C.	Expert Systems with Applications

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109	2024	Integrating climate change practices in a circular economy context—The perspective from chemical enterprises	Leal Filho, W.; Frizzo, K.; Eustachio, J.H.P.P.; Tsani, S.; Özuyar, P.G.	Sustainable Development
110	2024	International conference on "Photosynthesis and Hydrogen Energy Research for Sustainability-2023": in honor of Robert Blankenship, Győző Garab, Michael Grätzel, Norman Hüner and Gunnar Öquist	Subramanyam, R.; Tomo, T.; Eaton-Rye, J.J.; Yilmaz, G.; Allakhverdiev, S.I.	Photosynthesis Research
111	2024	Investigation of physical and electrical properties of a suboxide layer at Si/Si-hexafluoride interface	Kalem, S.	Scientific Reports
112	2024	Investigation of the effect of model structure type on the thermal performance of phase change materials through molecular dynamics simulation	Aich, W.; Basem, A.; Sultan, A.J.; Ghabra, A.A.; Eladeb, A.; Kolsi, L.; Salahshour, S.; Baghaei, S.	Case Studies in Thermal Engineering
113	2024	MOF-derived MnCe3.67C6Permeable microflower: A robust electrocatalyst for oxygen evolution reaction	Rashid, A.R.; Manzoor, S.; Ajisafe, M.P.; Akram Khan, S.; Sun, B.; Yalcin, S.; Qin, H.-L.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
114	2024	Numerical examination of exergy performance of a hybrid solar system equipped with a sheet-and-sinusoidal tube collector: Developing a predictive function using artificial neural network	Sun, C.; Fares, M.N.; Sajadi, S.M.; Li, Z.; Jasim, D.J.; Hammoodi, K.A.; Nasajpour-Esfahani, N.; Salahshour, S.; Alizadeh, A.	Case Studies in Thermal Engineering
115	2024	Offering a channel for cooling three lithium-ion battery packs with water/Cu nanofluid: An exergoeconomic analysis	Zhao, L.; Jasim, D.J.; Alizadeh, A.; Shirani, N.; Nasajpour-Esfahani, N.; Salahshour, S.; Shamsborhan, M.	Ain Shams Engineering Journal
116	2024	Optimising microalgae-derived butanol yield	Bauenova, M.O.; Sadvakasova, A.K.; Kossalbayev, B.D.; Yilmaz, G.; Huang, Z.; Wang, J.; Balouch, H.; Zaletova, D.E.; Lyaguta, M.A.; Alharby, H.F.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
117	2024	Optimum tilt and azimuth angles of heat pipe solar collector, an experimental approach	Wei, D.; Basem, A.; Alizadeh, A.; Jasim, D.J.; Aljaafari, H.A.S.; Fazilati, M.; Mehmandoust, B.; Salahshour, S.	Case Studies in Thermal Engineering
118	2024	Performance of proton exchange membrane fuel cell system by considering the effects of the	Hamedi, S.; Basem, A.; Al-Zahiwat, M.M.; Khudhair AL-Hamairy, A.;	Case Studies in Thermal Engineering

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110	2024	International conference on "Photosynthesis and Hydrogen Energy Research for Sustainability-2023": in honor of Robert Blankenship, Győző Garab, Michael Grätzel, Norman Hüner and Gunnar Öquist	Subramanyam, R.; Tomo, T.; Eaton-Rye, J.J.; Yilmaz, G.; Allakhverdiev, S.I.	Photosynthesis Research
111	2024	Investigation of physical and electrical properties of a suboxide layer at Si/Si-hexafluoride interface	Kalem, S.	Scientific Reports
112	2024	Investigation of the effect of model structure type on the thermal performance of phase change materials through molecular dynamics simulation	Aich, W.; Basem, A.; Sultan, A.J.; Ghabra, A.A.; Eladeb, A.; Kolsi, L.; Salahshour, S.; Baghaei, S.	Case Studies in Thermal Engineering
113	2024	MOF-derived MnCe3.67C6Permeable microflower: A robust electrocatalyst for oxygen evolution reaction	Rashid, A.R.; Manzoor, S.; Ajisafe, M.P.; Akram Khan, S.; Sun, B.; Yalcin, S.; Qin, H.-L.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
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116	2024	Optimising microalgae-derived butanol yield	Bauenova, M.O.; Sadvakasova, A.K.; Kossalbayev, B.D.; Yilmaz, G.; Huang, Z.; Wang, J.; Balouch, H.; Zaletova, D.E.; Lyaguta, M.A.; Alharby, H.F.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
117	2024	Optimum tilt and azimuth angles of heat pipe solar collector, an experimental approach	Wei, D.; Basem, A.; Alizadeh, A.; Jasim, D.J.; Aljaafari, H.A.S.; Fazilati, M.; Mehmandoust, B.; Salahshour, S.	Case Studies in Thermal Engineering
118	2024	Performance of proton exchange membrane fuel cell system by considering the effects of the	Hamedi, S.; Basem, A.; Al-Zahiwat, M.M.; Khudhair AL-Hamairy, A.;	Case Studies in Thermal Engineering

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119	2024	Photosynthesis and hydrogen energy for sustainability: harnessing the sun for a greener future	Kossalbayev, B.D.; Yilmaz, G.; Ozcan, H.G.; Soykan, G.; Yalcin, S.; Allakhverdiev, S.I.	Photosynthetica
120	2024	Prediction of heat transfer characteristics and energy efficiency of a PVT solar collector with corrugated-tube absorber using artificial neural network and group method data handling models	Li, L.; Hassan, W.H.; Mohammed, A.A.; Montufar, P.; AL-maamori, Z.M.; Sultan, A.J.; Salahshour, S.; Esmaeili, S.	International Communications in Heat and Mass Transfer
121	2024	Rational development of PPy/CuWO4 nanostructure as competent electrocatalyst for oxygen evolution, and hydrogen evolution reactions	Alotaibi, N.H.; Manzoor, S.; Saleem, S.; Mohammad, S.; Khalil, M.; Yalçin, Ş.; Abid, A.G.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
122	2024	Real-time verification of solar-powered forest fire detection system using ensemble learning	Yıldıran, N.	Expert Systems with Applications
123	2024	Remanufacturing Electric Mobility: Challenges and Opportunities in Designing Circular Business Models	Oleśków-Szłapka, J.; Corum, A.; Hoffa-Dąbrowska, P.; Stachowiak, A.	Lecture Notes in Mechanical Engineering
124	2024	Stochastic optimal design of a rural microgrid with hybrid storage system including hydrogen and electric cars using vehicle-to-grid technology	Er, G.; Soykan, G.; Canakoglu, E.	Journal of Energy Storage
125	2024	Study on oxygen evolution reaction efficiency demonstrated by Ce-E (E = S, Se and te) electrocatalyst	Shoukat, K.; Moazzam Khan, M.; Bukhari, S.; Abbas Shah, S.I.; Bashir, I.; Alothman, A.A.; Fahad Ehsan, M.; Naeem Ashiq, M.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
126	2024	Sustainable stationary hydrogen storage application selection with interval-valued intuitionistic fuzzy AHP	Acar, C.; Haktanır, E.; Temur, G.T.; Beskese, A.	International Journal of Hydrogen Energy
127	2024	Technology Assessment of Hydrogen Storage: Cases Enabling the Clean Energy Transition	Qudaih, S.; Bektas, Z.; Guven, D.; Kayakutlu, G.; Kayalica, M.O.	IEEE Transactions on Engineering Management
128	2024	The effect of amplitude of heat flux on the adsorption of doxorubicin by MOF11 bio-carrier	Hu, P.; Basem, A.; Jasim, D.J.; Raja, W.; Aljaafari, H.A.S.; Salahshour, S.; Hashemian, M.	International Communications in Heat and Mass Transfer

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129	2024	The effect of initial pressure on the thermal behavior of the silica aerogel/PCM/CuO nanostructure inside a cylindrical duct using molecular dynamics simulation	Gao, Y.; Basem, A.; Mohammad Sajadi, S.; Jasim, D.J.; Nasajpour-Esfahani, N.; Salahshour, S.; Esmaeili, S.; Baghaei, S.	Case Studies in Thermal Engineering
130	2024	The use of machine learning techniques for assessing the potential of organizational resilience	Ewertowski, T.; Güldoğuş, B.Ç.; Kuter, S.; Akyüz, S.; Weber, G.-W.; Sadlowska-Wrzesińska, J.; Racek, E.	Central European Journal of Operations Research
131	2024	Towards vehicle electrification: A mathematical prediction of battery electric vehicle ownership growth, the case of Turkey	Alatawneh, A.; Ghunaim, D.	Green Energy and Intelligent Transportation
132	2024	Unprecedented electrochemical activity of GdCoO3-gC3N4 nanocomposite for bifunctional oxygen and hydrogen evolution reaction	Almarhoon, Z.M.; Manzoor, I.; Shah, J.H.; Ozcan, H.G.; Abid, A.G.; Allakhverdiev, S.I.	Journal of Physics and Chemistry of Solids
133	2024	Using different Heuristic strategies and an adaptive Neuro-Fuzzy inference system for multi-objective optimization of Hybrid Nanofluid to provide an efficient thermal behavior	Wang, Z.; Shami, H.O.; Kazim, K.J.; Basem, A.; Al-fanhrawi, H.J.; Dacto, K.E.C.; Salahshour, S.; Khajehkhabaz, M.; Ali Eftekhari, S.	Swarm and Evolutionary Computation
134	2025	A comparative sustainability analysis of heat pump technologies integrated with electricity generation alternatives	El Kasti, O.; Ozcan, H.G.	International Journal of Hydrogen Energy
135	2025	A comprehensive framework for patent value indicators: Machine learning-driven value prediction in renewable energy patents	Kalıp, N.G.; Bozbura, F.T.; Atteyih, Y.	World Patent Information
136	2025	A comprehensive review of data analytics and storage methods in geothermal energy operations	Basem, A.; Al-Nussairi, A.K.J.; Khidhir, D.M.; Singh, N.S.S.; Baghoolizadeh, M.; Fazilati, M.A.; Salahshour, S.; Sajadi, S.M.; Hasanabad, A.M.	Results in Engineering
137	2025	A molecular dynamics approach to investigate the thermal performance of silica-aerogel/PCM at different magnetic field frequencies	Singh, N.S.S.; Rasheed, R.H.; Al-zahy, Y.M.A.; Al-Zahiwat, M.M.; Salahshour, S.; Hekmatifar, M.	Nano-Structures and Nano-Objects
138	2025	A systematic review of predictive, optimization, and smart control strategies for hydrogen-	Kaabinejadian, A.; Pozarlik, A.; Acar, C.	Applied Energy

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139	2025	Accurate prediction of physical properties of different Freons via different machine learning models	Du, J.; Karimi, M.; Khalaf, M.I.; Al-Nussairi, A.K.J.; Singh, N.S.S.; Hasson, A.R.; Ahmad, Z.; Salahshour, S.; Hashemi, M.	International Communications in Heat and Mass Transfer
140	2025	An innovative biosensing approach for Aflatoxin B1 detection via electrical impedance measurement	Üstünsoy, R.; Ertaş, T.; Gültekin, H.E.; Ergenç, A.F.; Dinç, B.; Bektaş, M.	Applied Food Research
141	2025	Analysis of different phase change materials (PCMs) and wall material in a nano-circular space thermal energy storage (TES) system: A molecular dynamics approach	Cao, C.; Ali, A.B.M.; Hussein, Z.A.; Sawaran Singh, N.S.; Abdullaeva, B.; Zubair, A.; Salahshour, S.; Baghaei, S.	International Journal of Thermal Sciences
142	2025	Applied photosynthesis: An idea whose time has come	Bruce, B.D.; Allakhverdiev, S.I.	Biochimica et Biophysica Acta - Bioenergetics
143	2025	Assessing Toxicological Safety of EverX Posterior and Filtek Ultimate: An In-Depth Extractable and Leachable Study Under ISO 10993-17 and 10993-18 Standards	Aydınoğlu, A.; Erdem Hepşenoğlu, Y.; Yalçın, C.O.; Sağır, K.; Ölçer Us, Y.; Eroğlu, S.E.; Hazar Yoruç, A.B.	ACS Omega
144	2025	Boosting hydrogen production via alkaline water splitting: Impact of Ag doping in Gd2O3 nanosheet arrays	Manzoor, S.; Ali, S.; Mansha, M.; Safronova, A.V.; Altaf, F.; Khan, S.A.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
145	2025	Comparative Forecasting of Energy Generation Using ARIMA and BiLSTM Models with Hyperparameter Optimization	Emaminia, S.; Demirkiran, G.; Ozcan, H.G.	EAI/Springer Innovations in Communication and Computing
146	2025	Comprehensive review of green roof and photovoltaic-green roof systems for different climates to examine the energy-saving and indoor thermal comfort	Liao, X.; Ali, A.B.M.; Singh, N.S.S.; Baghoolizadeh, M.; Alam, M.M.; Orlova, T.; Salahshour, S.; Alizadeh, A.	International Communications in Heat and Mass Transfer
147	2025	Concluding remarks	Acar, C.	Comprehensive Energy Systems
148	2025	Deep Learning of Telecommunication Technology for the Efficient Utilization of Embedded	Dere, G.	Embedded Systems for Biomedical Applications

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149	2025	Design, Performance, and Experimental Analysis of a Solar Still under Tangier Climate Conditions	Chorak, A.; Jeban, C.; Palenzuela, P.; Bahraoui, F.	IOP Conference Series: Earth and Environmental Science
150	2025	Effect of channel thickness on the particle diffusion and permeability of carbon nanotubes a membrane in reverse electrodialysis process using molecular dynamics simulation	Sun, S.; Basem, A.; Singh, N.S.S.; Al-zahy, Y.M.A.; Saeidlou, S.; Muzammil, K.; Salahshour, S.; Sajadi, S.M.; Sahramaneshi, H.	International Communications in Heat and Mass Transfer
151	2025	Effect of nanoparticle size on the thermal performance of paraffin-O2 hybrid heat sink using molecular dynamics approach	Ru, Y.; Ali, A.B.M.; Qader, K.H.; Hussein, R.A.; Jhala, R.; Soliyeva, M.; Salahshour, S.; Hekmatifar, M.	International Communications in Heat and Mass Transfer
152	2025	Engineering active sites in ternary CuNiPd alloy electrocatalysts supported on nickel foam for improved electrochemical water splitting	Ehsan, M.A.; Manzoor, S.; Khan, S.A.; Hakeem, A.S.; Mansha, M.; Ali, S.; Allakhverdiev, S.I.	Journal of Industrial and Engineering Chemistry
153	2025	Enhancing the Performance of a Maximum Power Point Tracking System Using an Improved Particle Swarm Optimization Method	Ahmed, M.; İşcan, Z.	AIP Conference Proceedings
154	2025	Experimental and numerical investigations of an active solar air heater: Energy and exergy analysis and optimization to increase the efficiency	Zhang, Z.; Belkpour, S.; Ali, A.B.M.; Jasim, D.J.; Hasson, A.R.; Abdullaev, S.; Salahshour, S.; Hekmatifar, M.	International Communications in Heat and Mass Transfer
155	2025	Exploring two-phase bubble dynamics and convective mass transfer in thermochemical Cu–Cl cycle for hydrogen production	Mohammadi, A.; Jianu, O.A.; Acar, C.	Chemical Engineering Science
156	2025	Fabrication of excellent and novel flowery Ag-MoS2 electrocatalyst: As a high-efficiency for water oxidation	Tighezza, A.M.; Manzoor, I.; Abid, A.G.; Siddique, Z.; Rashid, A.R.; Shah, J.H.; Allakhverdiev, S.I.	Materials Research Bulletin
157	2025	Facile fabrication of Sulfur-Doped CuCr2O4 Nanocatalysts: For enhanced bifunctional oxygen and hydrogen evolution reactions	Rashid, A.R.; Manzoor, S.; Ismail, M.A.; Voloshin, R.A.; Khan, S.A.; Allakhverdiev, S.I.; Qin, H.-L.	Inorganic Chemistry Communications
158	2025	Fundamental properties, characterization techniques, and applications for photo(electro) catalysis: From Nanosized manganese oxides to manganese coordination compounds	Khosravi, M.; Allakhverdiev, S.I.; Eaton-Rye, J.J.; Hołyńska, M.; Aro, E.-M.; Shen, J.-R.; Najafpour, M.M.	Coordination Chemistry Reviews

SDG 7: Affordable and Clean Energy — BAU Publications (2021–2025)

203 publications | Source: Scopus / SciVal; data updated: 25 October 2026. Includes journal articles and other publication types.

No.	Year	Publication Title	Authors	Journal / Publication Source
159	2025	Future directions in energy materials	Acar, C.; Dincer, I.	Comprehensive Energy Systems
160	2025	Future energy directions	Acar, C.; Dincer, I.	Comprehensive Energy Systems
161	2025	Green Sukuk to finance solar energy projects: an application in Turkey	Abdelhadi Mohamed Ali, H.; Uguriu, U.	Journal of Islamic Accounting and Business Research
162	2025	Harnessing solar energy: Feasibility assessment of 75 MW solar PV plant in a community in South Africa	Yıldıran, N.; Akyol, İ.A.; Işık, M.A.	Renewable Energy
163	2025	Heat transfer enhancement of phase change materials using tree shaped fins: A comprehensive review	Rashid, F.L.; Dhaidan, N.S.; Mahdi, A.J.; Kadhim, S.A.; Hammoodi, K.A.; Al-Obaidi, M.A.; Mohammed, H.I.; Ahmad, S.; Salahshour, S.; Agyekum, E.B.	International Communications in Heat and Mass Transfer
164	2025	Heat transfer performance evaluation of a photovoltaic thermal with different fins in the presence of nano-encapsulated phase change materials	Yan, G.; Zheng, Z.; Kazemi-Varnamkhasti, H.; Salahshour, S.; Baghaei, S.; Marzouki, R.	International Communications in Heat and Mass Transfer
165	2025	Hierarchical flower-like CuO/carbon dots nanocomposite as advanced bifunctional electrocatalysts for clean hydrogen generation	Airam, S.; Manzoor, S.; Siddique, Z.; Ismail, M.A.; Riaz, S.; Abid, A.G.; Zulfiqar, K.; Khan, S.A.; Allakhverdiev, S.I.	Inorganic Chemistry Communications
166	2025	Hybrid Control Strategy for VIENNA Rectifiers in More Electric Aircraft Electrical Systems	Alphan, M.C.; Soykan, G.	IEEE Access
167	2025	Hydrogen energy	Acar, C.; Dincer, I.	Comprehensive Energy Systems
168	2025	Hydrogen energy conversion systems	Acar, C.; Dincer, I.	Comprehensive Energy Systems

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No.	Year	Publication Title	Authors	Journal / Publication Source
171	2025	Impact of initial pressure and heat flux on hydrogen and carbon monoxide production in supercritical water gasification of biomass: A molecular dynamics study	Al-Asadi, M.; Ali, A.B.M.; Jasim, D.J.; Singh, N.S.S.; Salahshour, S.; Mohammad Sajadi, S.; Vahedi, K.	Applications in Energy and Combustion Science
172	2025	In silico design of biomass-to-hydrogen Pathways: A review	Kakimova, A.B.; Sadvakasova, A.K.; Kossalbayev, B.D.; Zadneprovskaya, E.V.; Xu, T.; Zaletova, D.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
173	2025	In vitro photocurrents from spinach thylakoids following Mn depletion and Mn-cluster reconstitution	Voloshin, R.; Goncharova, M.; Zharmukhamedov, S.K.; Bruce, B.D.; Allakhverdiev, S.I.	Biochimica et Biophysica Acta - Bioenergetics
174	2025	In-situ synthesis of polyethylene glycol-assisted combined semiconductor metallic oxides nanocomposite for solar cell, supercapacitor, photocatalytic, and antibacterial applications	Ayub, Y.; Farrukh, M.A.; Ben Khalifa, S.; Chebaane, S.; Ghodhbani, R.; Ismail, M.A.; Ibrar, M.; Munawar, T.; Allakhverdiev, S.I.	Ceramics International
175	2025	Investigating the effect of copper oxide nanoparticles radius on thermal behavior of silica aerogel/paraffin nanostructure using molecular dynamics simulation	Ru, Y.; Ali, A.B.M.; Qader, K.H.; Singh, N.S.S.; Jhala, R.; Soliyeva, M.; Salahshour, S.; Esmaeili, S.	International Communications in Heat and Mass Transfer
176	2025	Modeling the influence of external heat flux on thermal characteristics of the silica aerogel/paraffin in a cylindrical atomic duct	Geng, L.; Ali, A.B.M.; Babadoust, S.; Kumar, A.; Abdullaeva, B.; Hussein, R.A.; Salahshour, S.; Esmaeili, S.	Case Studies in Thermal Engineering
177	2025	MoO3/NiO bimetallic-N active sites in graphitic nitride sheet for enhanced water splitting and energy storage system	Alotaibi, N.H.; Manzoor, I.; Abid, A.G.; Shah, J.H.; Mohammad, S.; Kumar, O.P.; Zadneprovskaya, E.V.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
178	2025	Multi-criteria Comparison of Electric Sport Utility Vehicles Using Proportional Spherical Fuzzy VIKOR Method	Haktanır, E.; Kahraman, C.	Journal of Fuzzy Extension and Applications
179	2025	Multi-Criteria Sustainability Analysis for Variable Refrigerant Flow System Manufacturer Selection: An Integrated Multi-Criteria Decision-Making Approach to Environmental and	Karakaya, T.; Örnek, H.M.; Balcıoğlu, Y.S.	Sustainability (Switzerland)

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No.	Year	Publication Title	Authors	Journal / Publication Source
180	2025	Multi-objective optimization of vertical and horizontal solar shading in residential buildings to increase power output while reducing yearly electricity usage	Zhang, L.; Alizadeh, A.; Baghoolizadeh, M.; Salahshour, S.; Ali, E.; Escorcia-Gutierrez, J.	Renewable and Sustainable Energy Reviews
181	2025	Numerical study of thermal performance of silica-aerogel/paraffin nanostructure in the presence of CuO nanoparticles: A molecular dynamics approach	Ali, A.B.M.; Hussein, R.A.; Babadoust, S.; Singh, N.S.S.; Salahshour, S.; Baghaei, S.	Nano-Structures and Nano-Objects
182	2025	Optimal design of microgrid-based resilient hybrid electric vehicle station by considering uncertainties	Canakoglu, E.; Soykan, G.; Er, G.	International Journal of Hydrogen Energy
183	2025	Optimizing cyanobacterial hydrogen production: metabolic and genetic strategies with glycerol supplementation	Bozieva, A.M.; Khasimov, M.K.; Rao, M.S.; Sinetova, M.A.; Voloshin, R.A.; Dunikov, D.O.; Tsygankov, A.A.; Leong, Y.K.; Chang, J.-S.; Allakhverdiev, S.I.; Bruce, B.D.	Frontiers in Energy Research
184	2025	Optimizing the thermostat setting points of residential and insulated buildings in the direction of economic efficiency and thermal comfort through advanced multi-purpose techniques	He, P.; Ali, A.B.M.; Hussein, Z.A.; Singh, N.S.S.; Bains, P.S.; Saydaxmetova, S.; Baghoolizadeh, M.; Salahshour, S.; Alizadeh, A.	Energy and Buildings
185	2025	Photoactive materials	Acar, C.; Dincer, I.	Comprehensive Energy Systems
186	2025	Photosynthesis-based energy conversion systems	Hou, H.J.M.; Allakhverdiev, S.I.	Comprehensive Energy Systems
187	2025	Predicting Heatstroke Risk and Preventing Health Complications: An Innovative Approach Using Machine Learning and Physiological Data	Hosen, M.I.; Abdullah, A.N.; Aydin, T.; Ahad, M.A.R.; Islam, M.B.	Activity, Behavior, and Healthcare Computing
188	2025	Progress and innovation in key technologies for converting biomass to hydrogen	Kamshybayeva, G.K.; Sadvakasova, A.K.; Belkozhayev, A.M.; Kossalbayev, B.D.; Bauenova, M.O.; Zharmukhamedov, S.K.; Hou, H.J.M.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy

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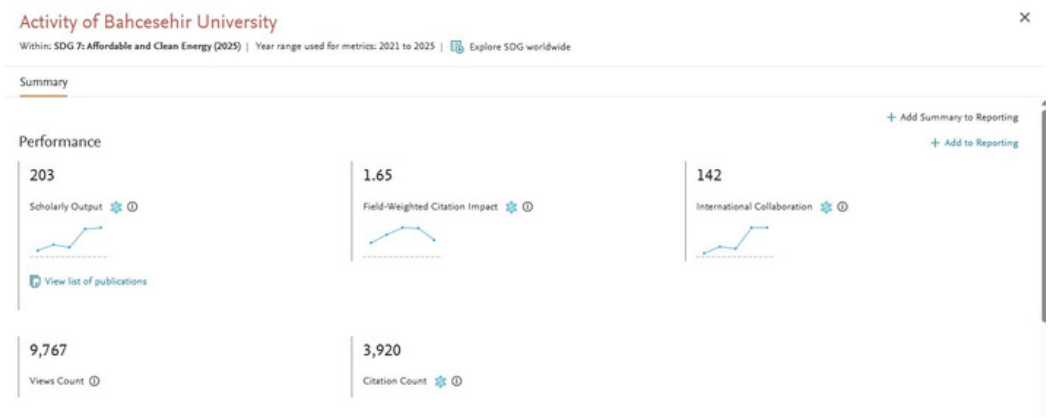
189	2025	Quasi-Dynamic Assessment of Electric Vehicle Charging Points in Radial Low Voltage Grid	Qudaih, S.; Soykan, G.	14th International Conference on Renewable Energy Research and Applications, ICRERA 2025
190	2025	Rational design of transition metal FeCo-supported CdSe hybrid (FeCo–CdSe) nanosheet electrocatalyst for alkaline OER and HER	Munawar, T.; Fatima, S.; Ismail, M.A.; Iqbal, F.; Khalid, A.; Bashir, A.; Rafaqat, M.; Khan, S.A.; Koc, M.; Yan, C.-F.; Allakhverdiev, S.I.	Materials Research Bulletin
191	2025	Solar-driven photocatalytic and photoelectrocatalytic hydrogen evolution reaction: Advances, challenges, and future directions	Khan, S.A.; Abid, A.G.; Shams, A.; Manzoor, S.; Voloshin, R.A.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
192	2025	Solid Poly(2-alkyl/aryl-2-oxazoline) Electrolytes: A Molecular Dynamics Study of Structure and Ionic Conductivity	Amirhaghian, N.; Ozlek, M.; Avaz Seven, S.; Yildiz, M.; Cebeci, F.C.; Dizman, B.	ACS Applied Energy Materials
193	2025	Strategies for genetic modification of microalgae to improve the production efficiency of liquid biofuel	Kossalbayev, B.D.; Kakimova, A.B.; Sadvakasova, A.K.; Bauenova, M.O.; Balouch, H.; Lyaguta, M.A.; Ahmad, F.; Kirbayeva, D.K.; Ozgul, S.; Allakhverdiev, S.I.	International Journal of Hydrogen Energy
194	2025	Surface engineering of Zr[sbnd]Co embedded biochar for efficient and cost–effective energy storage application	Shah, S.I.A.; Ehsan, M.F.; Alsaiari, N.S.; Ouladsmane, M.; Ashiq, M.F.; Tolj, I.; Allakhverdiev, S.I.	Journal of Energy Storage
195	2025	SUSTAINABLE GROWTH, RENEWABLE ENERGY AND CARBON EMISSIONS: EVIDENCE FROM A TVP-VAR APPROACH	Berk, N.; Sarili, S.; Yildirtan, D.C.	WIT Transactions on Ecology and the Environment
196	2025	Techno-economic and environmental analysis of Cu–Cl cycle for hydrogen production in hybrid refuelling stations: A case study of Highway 401, Canada	Mohammadi, A.; Jianu, O.A.; Acar, C.	International Journal of Hydrogen Energy
197	2025	The 12th International Conference on "Photosynthesis and Hydrogen Energy Research for Sustainability 2024": in honour of John Allen, Eva-Mari Aro, İbrahim Dinçer, Kazunari Domen, Elizabeth Gantt, and Andrey Rubin	Zivcak, M.; Kern, J.; Tomo, T.; Soykan, G.; Eaton-Rye, J.J.; Allakhverdiev, S.I.; Bruce, B.D.	Photosynthetica
198	2025	The impact of channel edge type on the particle diffusion and permeability of carbon	Li, X.; Ali, A.B.M.; Abbood, H.A.; Singh, N.S.S.; Al-Bahrani, M.;	International Communications in Heat and Mass Transfer

The figure below presents SciVal's overview of Bahçeşehir University's research performance under SDG 7 for the 2021–2025 period, including scholarly output, citation impact, international collaboration and publication views.





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