Times Higher Education Sustainability Impact Ratings

University: Al-Mustaqbal University

Country: Iraq

SDG 7.4: Energy and the community

7.4.3: Does your university as a body provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options).

Response:

Yes, Al-Mustaqbal University actively supports the local industry by offering various direct services focused on enhancing energy efficiency and promoting clean energy solutions.

The university has initiated multiple programs and formed partnerships with local organizations to encourage the use of renewable energy.

Below are some of the evidence .

- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1559**
- **https://wwww.uomus.edu.iq/Units/CommunityService.aspx?UnitID=19**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=2117**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1536**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1556**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1560**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1565**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1738**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1896**
- **https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1894**

- https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1895
- https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1898
- https://wwww.uomus.edu.iq/Units/Details.aspx?UnitID=19&NewsID=1889

- **Al-Mustaqbal Energy Research Center proudly inaugurated its first training course titled "Concepts and Foundations of Renewable Energy."**

  This course is primarily directed towards individuals in the Ministry of Agriculture and Planting. It aims to equip them with the knowledge and tools necessary to enhance energy efficiency and promote clean energy practices within their sectors. By focusing on this audience, the workshop seeks to address specific challenges and opportunities relevant to agricultural initiatives in relation to energy management.

  This event marked a significant step in promoting knowledge and awareness of sustainable energy practices among participants from various disciplines. This event is minaly

The course attracted a large and diverse audience professionals and all eager to deepen their understanding of renewable energy. Dr. Azher Mohsen Abd, a respected expert in the field, delivered an engaging and comprehensive lecture that set the tone for the training series.



The College of Engineering and Engineering Technologies holds the third Clean Energy Forum. Under the patronage of the President of Al-Mustaqbal University, Prof. Dr. Hasan Shakir, and under the supervision of the Dean of the Faculty of Engineering and Engineering Technologies, Assistant Prof. Dr. Azhar Mohsen Abdel, a workshop was held on the occasion of World Clean Energy Day. This event saw participation from professionals from various disciplines across different industries in the local market in Iraq, contributing their insights to the discussions.

The workshop was part of the university's initiatives to promote the Sustainable Development Goals, particularly Goal 7 (Clean and Affordable Energy). Organized in collaboration with the Faculty of Engineering and Engineering Technologies, specifically the Department of Power Mechanics Technology Engineering and the Energy Research Center, the workshop primarily targeted individuals in the Ministry of Agriculture and Planting.The workshop was part of the university's initiatives to promote the Sustainable Development Goals, particularly Goal 7 (Clean and Affordable Energy). Organized in collaboration with the Faculty of Engineering and Engineering Technologies, specifically the Department of Power Mechanics Technology Engineering and the Energy Research

Center, the workshop primarily targeted individuals in the Ministry of Agriculture and Planting.



https://uomus.edu.iq/CollegeEn/Details/104625

C- The first practical training course specialized in modern industrial control using programmed logic controllers (PLC) and HMI screens – Level(1) for controlling renewable energy systems concluded in cooperation between Al-Mustaqbal Energy Research Center and Babylon University-Faculty of Engineering. Participants included representatives from the Ministry of Electricity, the Ministry of Agriculture and Planting, and professionals from various private sector industries in the local market, contributing valuable insights and fostering collaboration aimed at advancing energy management practices.



For more information, visit:

https://uomus.edu.iq/CollegeEn/Details/65056

D- Workshop on Energy Harvesting: Al-Mustaqba Energy Research Center, in coordination with the Deanship of the Faculty of Engineering and Engineering Technologies at Al-Mustaqbal University, organized a workshop and lecture on energy harvesting. M. Dr. Zainab Shaker Radif in the presence of the Dean of the College Dr. Azhar Mohsen Abd, Director of the Center and a number of professors of the University of Kufa. The lecture focused on the basic methods used to harvest energy from its various sources, especially harvesting energy from vibrational motion using besoalectic materials, which convert kinetic energy into electrical energy. This workshop promotes awareness on energy harvesting techniques, encourages cooperation between universities and research centers, and supports scientific research in the fields of renewable energy.



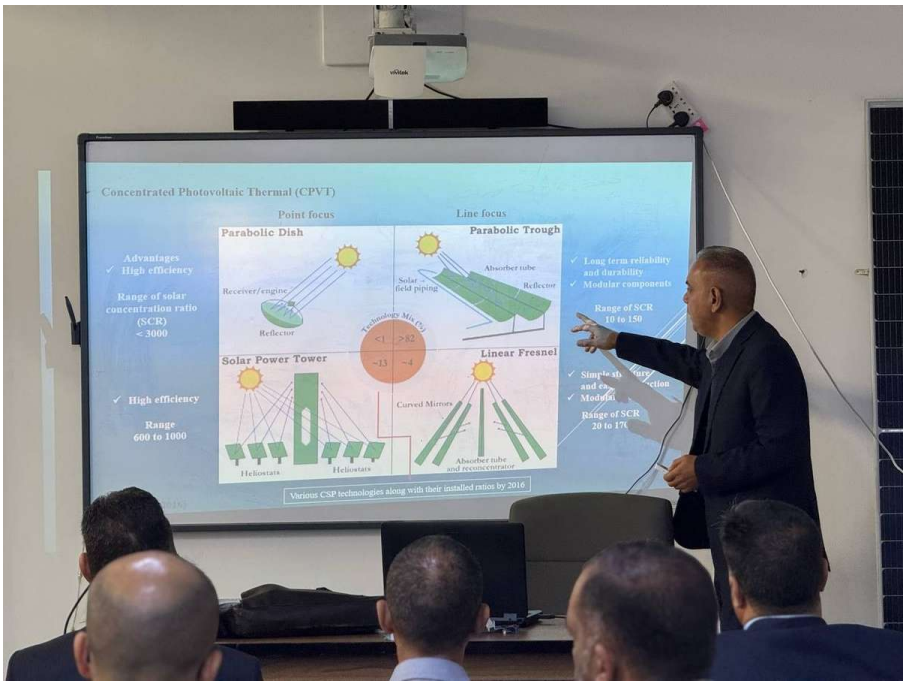
For more information, please visit:

https://uomus.edu.iq/CollegeEn/Details/104671

D- Workshop on Energy Harvesting: The Al-Mustaqbal Energy Research Center, in coordination with the Deanship of the Faculty of Engineering and Engineering Technologies at Al-Mustaqbal University, organized a workshop and lecture on energy harvesting. The event featured M. Dr. Zainab Shaker Radif, along with the Dean of the College, Dr. Azhar Mohsen Abd, the Director of the Center, and several professors from the University of Kufa.

Participants included representatives from the Ministry of Higher Education and Scientific Research, local companies, and professionals from various industries. The lecture focused on the fundamental methods used to harvest energy from various sources, particularly the harvesting of energy from vibrational motion using piezoelectric materials, which convert kinetic energy into electrical energy. This workshop aimed to promote awareness of

energy harvesting techniques, encourage cooperation between universities and research centers, and support scientific research in the fields of renewable energy.



For more information, please visit:

https://uomus.edu.iq/CollegeEn/Details/104671

- **An awareness campaign on waste recycling.**

Waste recycling is important in biomass systems as it considered as a renewable energy sources. For example, the Department of Building and Construction Engineering held a scientific seminar titled "Recycling Beverage Containers." This seminar took place at Al-Mustaqbal University.

https://www.uomus.edu.iq/NewDep.aspx?depid=5&newid=23237

There are many workshops that have been completed by the university to teach the community, as attached in the following links:

Additional gathering and workshop can be found below:

A- **Workshop on the solar energy thermal system in Al-Mustaqbal center for energy research**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=61409

B- **Workshop about Carbon footprint**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=84482

C- **Workshop about Ozon and carbon emissions**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=28859

D- **Workshop on the Heat pump and its applications in energy efficiency and emissions reduction**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=61038

E- **Seminar on technologies to improve energy efficiency and reduce emissions**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=61472

F- **Seminar on the renewable energy to the schools**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=61477

G- **SCIENTIFIC WORKSHOP ON METHODS OF CLEANING SOLAR CELLS**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=15505

H- **A scientific trip to the Hillah Comprehensive Power Plant for students**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=63160

I- **Seminar on steam power plant for clean environment**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=62803

J- **SCIENTIFIC SEMINAR ON THE IMPORTANCE OF HYDROELECTRIC ENERGY**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=15977

K- **Workshop on wind energy**

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=60856

L- Workshop on geothermal energy

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=39669

M- Workshop on designing an air-cooling system for a hybrid vehicle: a promising technique in emission reduction

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=50574

N- TRAINING WORKSHOP ON MEASURING DEVICES FOR SOLAR ENERGY SYSTEMS

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=16048

O- PRACTICAL WORKSHOP FOR STUDENTS OF THE FOURTH STAGE ON THE PARABOLIC TYPE SOLAR HEATER SYSTEM

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=16606

P- Workshop about Ozon and carbon emissions

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=28859

Q- SCIENTIFIC WORKSHOP ON METHODS OF CLEANING SOLAR CELLS

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=15505

R- SCIENTIFIC SEMINAR ON THE IMPORTANCE OF HYDROELECTRIC ENERGY

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=15977

S- TRAINING WORKSHOP ON MEASURING DEVICES FOR SOLAR ENERGY SYSTEMS

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=16048

T- PRACTICAL WORKSHOP FOR STUDENTS OF THE FOURTH STAGE ON THE PARABOLIC TYPE SOLAR HEATER SYSTEM

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=16606

U- Seminar about Carbon Emission

https://uomus.edu.iq/NewDep.aspx?depid=2&newid=84482

Al-Mustaqbal Energy Research Center at Al- Mustaqbal University announces several activites, such as workshops, seminars, webinars, trainging and even lectrues about renewable energies and applications introduced for the professional and representative for several private companies in the local market. In addition, the center offers a free course titled "Course on Concepts and Foundations of Renewable Energy". In this free course, the centre introduced the main principle and resources of the renewable energy and their critical rules in reducing emissions and providing sustainable future of the energy.

More than a hundred activities have been achieved by the center focused on renewable energy and its impact on climate change. For more information about these activities, please visit the main webpage of the center:

https://energy.uomus.edu.iq/en/Units/News.aspx?UnitID=19

https://uomus.edu.iq/NewCol.aspx?newid=27137

- Al-Mustaqbal University played a pivotal role in addressing the multifaceted challenges posed by climate change. As centers of research, education, and community engagement, they are uniquely positioned to lead initiatives that foster sustainability and innovation. Here are several key areas where universities can make a significant impact. For more information, please check the website:

https://energy.uomus.edu.iq/ArSustainability/pdf/Interim_report%5B1%5D.pdf

- Al-Mustaqbal University hosted "The Second International Conference on The Future of Sustainable Energy" from February 20 to 22, 2024. The conference aims to create a platform for researchers to discuss efficient, coherent, and coordinated

approaches to developing new and renewable energy resources in the region, ensuring access for all. Additionally, it seeks to highlight the significant role that clean energy technology plays in addressing various challenges, including climate change. This conference will foster a cohesive and sustainable network of relationships among emerging researchers, innovators, industry professionals, and academics. For more information, please visit:

In addition, Al-Mustaqbal University is planning to achieve renewaboe energy policy as shown below:

A- Organization of training of academic staffs and experts in the field of energy and buildings construction for bettering utilization of sustainable energy in buildings.

B- Encouragement of scientific research and progress in the field of energy and buildings.

C- Promotion of innovative funding of energy efficiency, transition and consumption projects.

D- Using energy efficient of equipment, processes, systems, and devices such as LED lighting, renewable energy, solar powered air conditioning.

E- Al-Mustaqbal University is the first universities in Iraq to reduce emission and try to reduce the green house and the global worming which they are both affecting on the climate change. There are many steps and actions the Mustaqbal university take it to reduce emission and the global warming by reducing the electricity demand and the other sources of the CO_2 emissions.

F- taking serious steps to transfer the university energy sources from fossil fuel to renewable energy by three steps

G- By 2026 install about 5 MW of PV models to meet all the University energy demand (Electricity, cooling and heating) to be the first university in Iraq to be 100% green and zero emissions.

H- by 2027 connecting the university local electrical grid with National Grid to export the surplus of electrical power generated by the PV models to it to reduces amounts of the emissions of electricity per kwh. However, the CO2 emission per kwh in Iraq is about 2.5kg

I- Support the scientist and the researcher to innovate the new technologies working to reduce the greenhouse.

J- Conducting many practical experiments to support researchers and discover real and realistic solutions for society.

K- Conducting several awareness campaigns at the university and community level about the importance of planting and caring for trees because of their importance in climate change

Additional evidence link:





https://uomus.edu.iq/En/EnNewDep.aspx?depid=2&newid=6460

- **The Energy Research Centre at Al-Mustaqbal University announces the establishment of a free course titled "Course on Concepts and Foundations of Renewable Energy. In this free course, the centre introduced the main principle**

and resources of the renewable energy and their critical rules in reducing emissions and providing sustainable future of the energy.

For more information, please visit:
https://uomus.edu.iq/NewCol.aspx?newid=27137

- Al-Mustaqbal University organized the Third Engineering Forum for Graduation Projects entitled “Graduation Projects: Creativity and Innovation Towards a Sustainable University.' under the patronage of the president Professor Dr. Hassan Shakir Majdi, and the supervision of the Dean of the College of Engineering and Engineering Technologies, Assistant Professor Dr. Azhar Mohsen Abd. With the collaboration with the University of Babylon / College of Engineering, the Third Engineering Forum for Graduation Projects was held. The forum addressed several topics, including:

A- Mechanical and thermal applications
B- Applications of renewable and clean energy
C- Reducing the use of fossil fuels
D- Environmental conservation and mitigating the greenhouse effect
E- Carbon footprint and reducing gas emissions.




RECOMMENDATION
Countries should support projects and research that study production.
The start of production and use of clean renewable energy on a large scale in countries.
Directing the media to highlight the benefits of the renewable fuel alternative.
Encouraging
as well as
ting studies
ontributing
theimplementation
of green ideas on
the ground.

❖ Al-Mustaqbal University introduced an event "The first day of the training course titled 'Concepts and Foundations of Renewable Energy.' In this event, the presenter explained an introduction to the various types of renewable energy, such as solar energy, wind energy, hydroelectric energy, and biomass energy. He also discussed the practical applications of these different types of renewable energy, explaining how they can be used in various fields such as electricity generation, heating, and other applications. Several government, local communities, and industries representatives were invited to share their ideas about this topic.





https://uomus.edu.iq/NewDep.aspx?depid=2&newid=27275

- Student projects in the field of renewable energy to support the community

















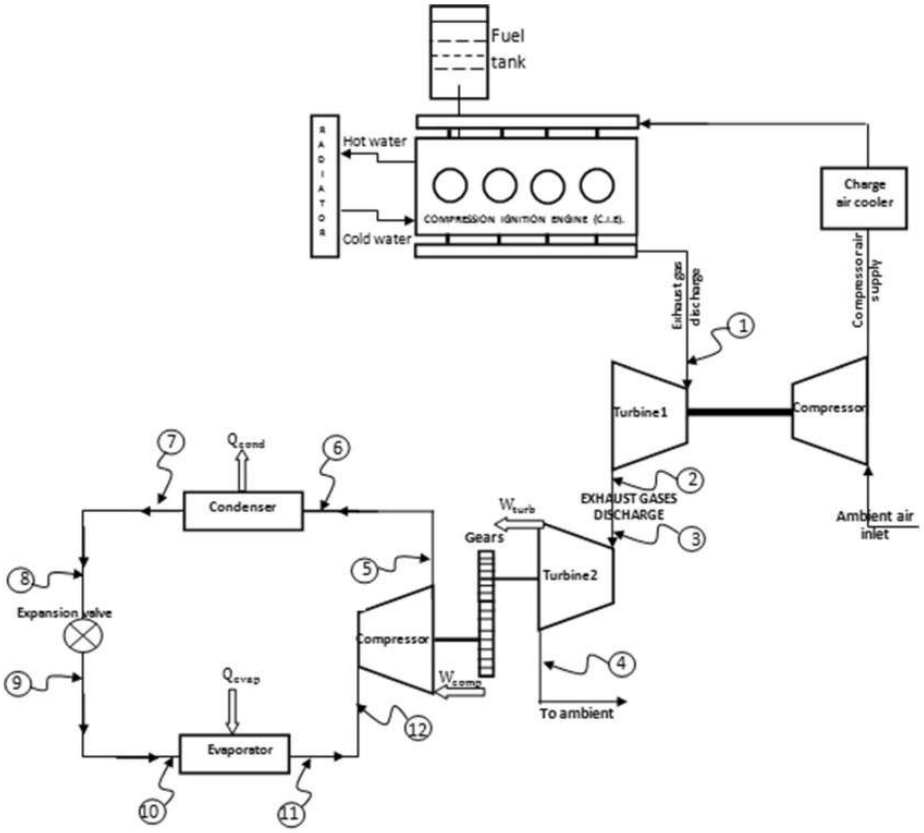
https://uoı

4- Patent that service the industry

Al-Mustaqbal University aimed at improving energy efficiency and clean energy. The industrial sector seeks the assistance of energy experts from the professors working at our campus; promote cooperation between the university and industry sectors. Ministry of higher education and scientific research supplied the universities with a platform to upload their ideas of the applied research to allow for the industrial companies in private and public sector to know about these ideas. One of these service that involve a patent on "Design of Cooling System for an Automotive using Exhaust Gasses of Turbocharged Diesel Engine" prepared by Prof. Dr. Qusay Rasheed Al-Amir1 and Asst. Prof. Dr. Mohamed F. Al-Dawody and Assit Prof. De. Azher M. Abed, HOD of air conditioning and refrigeration techniques engineering department, Al-Mustaqbal University College






Fuel tank
RADIATOR
Hot water
Cold water
COMPRESSION IGNITION ENGINE (C.I.E).
Charge air cooler
Exhaust gas discharge
Compressor air supply
1
Turbine1
Compressor
2
EXHAUST GASES DISCHARGE
3
Ambient air inlet
7
Q_{cond}
6
Condenser
W_{turb}
Gears
Turbine2
5
8
Expansion valve
Compressor
W_{comp}
4
To ambient
9
Q_{evap}
12
Evaporator
10
11

https:/

❖ **Research on renewable energy**

And a lot of ressearch article related to renewable energy, such as:

1- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85208315221&doi=10.1016%2fj.energy.2024.133594&partnerID=40&md5=72df99a36b432058fecea57ba3938066

2- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85209642043&doi=10.1016%2fj.csite.2024.105514&partnerID=40&md5=4a58088384b376a910c730ecf5eda0d7

3- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85209580294&doi=10.1016%2fj.energy.2024.133850&partnerID=40&md5=deb7c2222ce502c49af42247f55cae07

4- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85206991419&doi=10.1016%2fj.energy.2024.133482&partnerID=40&md5=fe9c2d5e0265b113028a7279d1ad6ad2

5- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85209239149&doi=10.1016%2fj.csite.2024.105492&partnerID=40&md5=44511e82d6147389eda4655d3d32859f

6- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203865832&doi=10.1016%2fj.energy.2024.133043&partnerID=40&md5=b25caf7a8743f6d1702e6cc0846bdff5

7- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85201380579&doi=10.1016%2fj.energy.2024.132593&partnerID=40&md5=30682e31620ebb08153b73f5ecd71f98

8- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203024196&doi=10.1016%2fj.psep.2024.08.047&partnerID=40&md5=a94cb72dfa8560af5502dc02ce4cdc3f

9- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85205684162&doi=10.1016%2fj.csite.2024.105210&partnerID=40&md5=4b0f12032781b17737b980883aaa0625

10- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85205006494&doi=10.1016%2fj.est.2024.113871&partnerID=40&md5=537583c845e9271e356f095325b5b932

11- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85201490998&doi=10.1016%2fj.energy.2024.132703&partnerID=40&md5=30e022a1698ded91f0bce2127404a195

12- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85205498067&doi=10.1016%2fj.csite.2024.105228&partnerID=40&md5=e9b4527f7273be6b68aee3635b58d3f4

13- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85199110454&doi=10.1016%2fj.envres.2024.119526&partnerID=40&md5=f8e2c4b5a73192cc7ae80d6b15fb2c18

14- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85205542654&doi=10.1016%2fj.est.2024.113966&partnerID=40&md5=020f44e53a3ddd0fbb0618a029dace73

15- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85207804715&doi=10.1016%2fj.csite.2024.105343&partnerID=40&md5=3c329e1f76a19c329d9769549ce41008

16- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85199271754&doi=10.1016%2fj.psep.2024.07.062&partnerID=40&md5=4b394ffb757c79af3bfa23992ebdddc2

17- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85200816067&doi=10.1016%2fj.psep.2024.07.068&partnerID=40&md5=fba108d478113989c5146533a32a9424

18- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193900146&doi=10.1016%2fj.desal.2024.117756&partnerID=40&md5=b3e0b6065ff1b24a0127a6571a66affd

19- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85200240954&doi=10.1016%2fj.psep.2024.07.091&partnerID=40&md5=bbacd091a61875602aa8a74d183adea4

20-

21- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203245427&doi=10.1016%2fj.rineng.2024.102823&partnerID=40&md5=6885ecb0d422129b40f8c1e3228911c4

22- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85201201158&doi=10.1016%2fj.renene.2024.121119&partnerID=40&md5=57d2e1ff1c290927b4c205df28908b2e

23- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85202290341&doi=10.1016%2fj.csite.2024.105028&partnerID=40&md5=cf34b4daf6edd8db18ee04b5da6db2bc

24- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193904323&doi=10.1016%2fj.csite.2024.104585&partnerID=40&md5=1d6279c45137561d6bf2f5ee03003d15

25- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85194490319&doi=10.1016%2fj.psep.2024.05.110&partnerID=40&md5=64bf3be3384f8b32e3b5874aadfbeafd

26- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193068082&doi=10.1016%2fj.csite.2024.104538&partnerID=40&md5=4bc1e7e0e7b21325c6423060ba36750a

27- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85194035332&doi=10.1016%2fj.csite.2024.104555&partnerID=40&md5=3bb990a6e230c70e2f8790ab56451d87

28- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193001750&doi=10.1016%2fj.csite.2024.104485&partnerID=40&md5=59314ec45b1b1f83ec09fdf1b5cd95d1

29- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85192177563&doi=10.1016%2fj.psep.2024.04.116&partnerID=40&md5=55281208a7ade643001e2f98eaee6f80

30- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193245839&doi=10.1016%2fj.csite.2024.104511&partnerID=40&md5=ec4015e8f63b3dab6223af95b7bca583

31- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85192749248&doi=10.1016%2fj.psep.2024.04.118&partnerID=40&md5=e209a68ace58d0b4b3510a644f52edad

32- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85194151524&doi=10.1016%2fj.csite.2024.104597&partnerID=40&md5=6b8949468837e8abc8888376e6efead0

33- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85192106324&doi=10.1016%2fj.est.2024.111880&partnerID=40&md5=52a1dc9c0cf7b3de528fe8f5a8e4acb2

34- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193599897&doi=10.1016%2fj.heliyon.2024.e31244&partnerID=40&md5=19ee6c277325b6582e746f89376e51a0

35- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193205887&doi=10.1063%2f5.0203755&partnerID=40&md5=035419445f4bdc39d75102550d5f06df

36- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85189077725&doi=10.1016%2fj.csite.2024.104298&partnerID=40&md5=5ded569ea90054873c6aa0dbab22a2ff

37- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85186955205&doi=10.1016%2fj.est.2024.111104&partnerID=40&md5=49714b81716302b7bb286cb9dea4e40c

38- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85189368424&doi=10.1016%2fj.csite.2024.104319&partnerID=40&md5=9ba82b8b985034c73266177e6252131a

39- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85189109607&doi=10.1016%2fj.csite.2024.104308&partnerID=40&md5=23cbc1cca1bd74d42056b6350d744d75

40- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85188251658&doi=10.1016%2fj.csite.2024.104238&partnerID=40&md5=49a89b7cd69a699318ab20fb3372bc99

41- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85185840528&doi=10.1016%2fj.csite.2024.104135&partnerID=40&md5=d09c729b0b668bfe092d05d33eac80bc

42- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85188861429&doi=10.1016%2fj.csite.2024.104291&partnerID=40&md5=3d4211d8ff467b4fd081589c064735db

43- https://www.scopus.com/inward/record.uri?eid=2-s2.0-85197848282&doi=10.1016%2fj.csite.2024.104708&partnerID=40&md5=fc3566bd206d8a45b0cf68168a5cf278

Most of these articles are funded by the community and solve an existent issues.