Academic articles about renewable energy

Renewable energy is derived from natural processes that are replenished constantly. In its various forms, it derives directly from the sun, wind, rain, tides of ocean, biomass and geothermal resources from heat generated deep within the earth. In2008, about 19% of global final energy consumption came from renewable, with 13% coming from ...

The pressing challenge of climate change necessitates a rapid transition from fossil fuel-based energy systems to renewable energy solutions. While significant progress has been made in the development and deployment of renewable technologies such as solar and wind energy, these standalone systems come with their own set of limitations.

The preceding results suggest that uptake of renewable energy in the grid, corresponding to increasingly distributed power generation, can lead naturally to improved grid function insofar as synchrony is concerned. ... or indexed, but they are screened. eLetters should provide substantive and scholarly commentary on the article. Neither ...

Introduction. Nowadays, the technology of renewable-energy-powered green hydrogen production is one method that is increasingly being regarded as an approach to lower emissions of greenhouse gases (GHGs) and environmental pollution in the transition towards worldwide decarbonization [1, 2].However, there is a societal realization that fossil fuels are not ...

Renewable Energies is a scientific journal whose main goal is to be a reference for publishing the more recent advances in renewable energies, including solar photovoltaic, solar thermal, wind, hydraulic, biomass, geothermal, biogas, and oceanic energy.The reported advances will focus on new components and systems, technology perspectives, operation and ...

Development of Renewable Energy Map (REM): utilizing the data from IRENA, EUROSTAT and JRC, the research involves developing a comprehensive REM. This map is a pivotal tool in the research, as it visually represents regions with significant potential for renewable energy development. The REM is grounded in unique datasets that include ...

Journal of Renewable Energy publishes papers relating to the science and technology of renewable energy generation, distribution, storage, and management. It also covers the environmental, societal, and economic impacts of renewable ...

Renewable energy sources strike a perfect balance between economic, technical and environmental considerations, and contribute to a more sustainable development that will favour future generations. ... Halder P., Kähkönen T., Puhakka A. Challenges to renewable energy: A bulletin of perceptions from international academic arena. Renew. Energy ...

Academic articles about renewable energy

The use of renewable energy resources, such as solar, wind, and biomass will not diminish their availability. Sunlight being a constant source of energy is used to meet the ever-increasing energy need. This review discusses the world"s energy needs, renewable energy technologies for domestic use, and highlights public opinions on renewable energy. A ...

We compile the climate policy data for our index from advocacy groups, government websites, and academic sources. ... Carley, S. State renewable energy electricity policies: an empirical ...

Energy derived from fossil fuels contributes significantly to global climate change, accounting for more than 75% of global greenhouse gas emissions and approximately 90% of all carbon dioxide emissions. Alternative ...

Renewable and Sustainable Energy Transition has a mission to share the most interesting and relevant problems, solutions, applications, novel ideas and technologies to support the transition to a low carbon future and achieve our global emissions targets as established by the United Nations Framework Convention on Climate Change.. Continuing the mission of the partner ...

Here we review the current state of understanding--based on a rapidly growing body of academic and policy literature--about the potential adverse consequences of the energy transition for ...

The best energy sources which we should utilize for taming the global warming are solar radiation energy from outside the earth and magma energy from the interior of the earth (3). References: 1. John Parsons et al., A fresh look at nuclear energy, Science 11 Jan 2019: Vol. 363, Issue 6423, pp. 105 2.

Renewable energy can supply two-thirds of the total global energy demand, and contribute to the bulk of the greenhouse gas emissions reduction that is needed between now ...

The rapid depletion of fossil fuels, which accounts for nearly 80% of global energy consumption, demands an urgent need for research aimed at finding sustainable and renewable energy alternatives (Tester et al., 2012).Solar, hydropower, geothermal, biomass, and wind energy sources have been proposed and widely studied (Mohammed et al., 2013, Al-Ali and ...

Current Trends in Sustainability. The imperative to adopt renewable power solutions on a worldwide scale continues to grow even more urgent as the global average surface temperature hits historic highs and amplifies the danger from extreme weather events many regions, the average temperature has already increased by 1.5 degrees, and experts predict ...

Among various renewable energy technologies, solar power generation is the most common and well-known technology and has been actively applied worldwide (Rezk et al., 2019; Iqbal et al., 2021).Other than solar

energy systems, renewable energy resources like wind, geothermal, and biomass energy systems have been getting good attention and promising ...

The preceding results suggest that uptake of renewable energy in the grid, corresponding to increasingly distributed power generation, can lead naturally to improved grid function insofar as synchrony is concerned. ... or ...

Our portfolio ranges from books on the technical and economic know-how of the energy industry for daily professional and academic use, to scientific studies on fossil fuels and nuclear energy, specialist articles on renewable energy sources and journals with current articles on energy policy.

Without fundamentally altering how humans generate and utilise energy, there is no effective strategy to safeguard the environment. The motivation behind this study was to analyse the effectiveness of renewable energy in addressing climate change, as it is one of the most pressing global issues. This study involved the analysis of panel data covering 138 ...

As the development of renewable energy source is even faster than the ability to inject them into the local grid, the congestion in the grid leads to the curtailment of the renewable energy sources. ... Bindra H., Revankar S. (Eds.), Storage and hybridization of nuclear energy, Academic Press (2019), pp. 49-117, 10.1016/B978-0-12-813975-2.00004 ...

The results of our analysis, revealed that the majority of countries with the exception of Canada, exhibited a downward trend, underscoring the potential of increasing renewable energy consumption as an effective method ...

This review discusses the world"s energy needs, renewable energy technologies for domestic use, and highlights public opinions on renewable energy. A systematic review of ...

The Journal of Renewable and Sustainable Energy is an interdisciplinary journal covering specific areas of renewable and sustainable energy relevant to the physical science and engineering communities. The journal has a strong focus on integration of disciplines for renewable power technologies at global scales that have the potential to ...

The primary objective for deploying renewable energy in India is to advance economic development, improve energy security, improve access to energy, and mitigate climate change. Sustainable development is possible by use of sustainable energy and by ensuring access to affordable, reliable, sustainable, and modern energy for citizens. Strong government ...

3 The perspective of solar energy. Solar energy investments can meet energy targets and environmental protection by reducing carbon emissions while having no detrimental influence on the country"s development

[32, 34] countries located in the "Sunbelt", there is huge potential for solar energy, where there is a year-round abundance of solar global horizontal ...

The Energy Committee projects have gathered knowledge from various sources, both within and outside the academic world, and from a number of seminars and hearings, in addition to the Committee"s Energy 2050 symposium. In this article, we summarize the Energy Committee"s scenario estimates of future renewable energy contributions, which were ...

08 August 2023. Clean energy can fuel the future -- and make the world healthier. Research challenges the myth that clean energy acts as a brake on global economic development. ...

The United States faces energy shortages and increasing energy prices within the next few decades (Duncan 2001) al, petroleum, natural gas, and other mined fuels provide 75% of US electricity and 93% of other US energy needs ().On average, every year each American uses about 93,000 kilowatt-hours (kWh), equivalent to 8000 liters of oil, for all purposes, ...

2 days ago· Renewable energy is essential for power system decarbonization, but extended and unexpected periods of extremely low wind and solar resources (i.e., wind and solar droughts) pose a threat to ...