
A SOLAR ENERGY REVIEW AND ITS DIVERSE APPLICATIONS

Dr. Pavankumar Singh*

*Faculty of Engineering,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA

Email id: pavan.engineering@tmu.ac.in

DOI: **10.5958/2249-7315.2021.00262.8**

ABSTRACT

Solar energy, often known as solar thermal energy, is a kind of thermal energy that may be collected utilizing a number of sophisticated emerging technologies, including photovoltaic's and solar thermal energy. Traditional energy harvesting techniques depend on nonrenewable energy sources, which have a major negative environmental effect since they emit a range of harmful and toxic chemicals. Solar energy is one of the most promising and finest nonrenewable energy options available. It may be used as a primary energy source as well as for secondary energy production such as electricity and steam. Solar energy has two major benefits: it is inexpensive and generates less pollution. Solar energy is extensively utilized to generate electricity, which is a major use of solar energy. The purpose of this review essay was to give a high-level overview of solar energy and its possible applications. Solar energy has the potential to help fulfill the energy needs of a rising population in the future in a more effective way.

KEYWORDS: *Conventional Energy, Electricity, Photovoltaic Cell, Renewable Energy, Solar Energy.*

REFERENCES:

1. Kabir E, Kumar P, Kumar S, Adelodun AA, Kim KH. Solar energy: Potential and future prospects. Renewable and Sustainable Energy Reviews. 2018.
2. Sampaio PGV, González MOA. Photovoltaic solar energy: Conceptual framework. Renewable and Sustainable Energy Reviews. 2017.
3. Alva G, Liu L, Huang X, Fang G. Thermal energy storage materials and systems for solar energy applications. Renewable and Sustainable Energy Reviews. 2017.
4. Zafar M, Kumar S, Kumar S, Dhiman AK, Park HS. Maintenance-energy-dependent dynamics of growth and poly(3-Hydroxybutyrate) [p(3hb)] production by azohydromonas lata mtcc 2311 using simple and renewable carbon substrates. Brazilian J Chem Eng. 2014;
5. Gupta S, Mishra T, Varshney S, Kushawaha V, Khandelwal N, Rai P, et al. Coelogen ameliorates metabolic dyshomeostasis by regulating adipogenesis and enhancing energy expenditure in adipose tissue. Pharmacol Res. 2021;
6. Sehgal A, Kaushik AK, Choudhary S, Saini S. Prewett Edge Detector Method for Content Extraction in Moving Pictures or Images. In: 2019 2nd International Conference on Power Energy Environment and Intelligent Control, PEEIC 2019. 2019.
7. Kumar AU, Sachar A. Evaluation of correlation's between Cbr using Dcp with laboratory Cbr at varying energy levels. Int J Adv Sci Technol. 2020;
8. Timilsina GR, Kurdgelashvili L, Narbel PA. Solar energy: Markets, economics and policies. Renewable and Sustainable Energy Reviews. 2012.
9. Sansaniwal SK, Sharma V, Mathur J. Energy and exergy analyses of various typical solar

energy applications: A comprehensive review. *Renewable and Sustainable Energy Reviews*. 2018.

10. Shahsavari A, Akbari M. Potential of solar energy in developing countries for reducing energy-related emissions. *Renewable and Sustainable Energy Reviews*. 2018.
11. Jain N, Awasthi Y. WSN-AI based Cloud computing architectures for energy efficient climate smart agriculture with big data analysis. *Int J Adv Trends Comput Sci Eng*. 2019;
12. Hafez AZ, Soliman A, El-Metwally KA, Ismail IM. Tilt and azimuth angles in solar energy applications – A review. *Renewable and Sustainable Energy Reviews*. 2017.
13. Tessema Mola G, Mbuyise XG, Oseni SO, Dlamini WM, Tonui P, Arbab EAA, et al. Nanocomposite for Solar Energy Application. *Nano Hybrids Compos*. 2018;
14. Blanco J, Malato S, Fernández-Ibañez P, Alarcón D, Gernjak W, Maldonado MI. Review of feasible solar energy applications to water processes. *Renewable and Sustainable Energy Reviews*. 2009.
15. Fernández-González D, Ruiz-Bustanza Í, González-Gasca C, Piñuela Noval J, Mochón-Castaños J, Sancho-Gorostiaga J, et al. Concentrated solar energy applications in materials science and metallurgy. *Solar Energy*. 2018.
16. Gray V, Dzebo D, Abrahamsson M, Albinsson B, Moth-Poulsen K. Triplet-triplet annihilation photon-upconversion: Towards solar energy applications. *Physical Chemistry Chemical Physics*. 2014.
17. Mishra P, Tiwari D, Khan MM, Manger Pt. Evaluation Of Oxidative Stress And Dyslipidemia In Diagnosed Hypertensive Patients. *Biochem Cell Arch*. 2019;
18. Sah MK, Gupta DK, Rani P. Energy Efficient Routing Protocol for Wireless Sensor Networks with Multiple Sinks. In: *Proceedings - 2015 2nd IEEE International Conference on Advances in Computing and Communication Engineering, ICACCE 2015*. 2015.
19. Shikha D, Kaur R, Gupta R, Kaur J, Chandan, Sapra BK, et al. Estimation of indoor radon and thoron levels along with their progeny in dwellings of Roopnagar District of Punjab, India. *J Radioanal Nucl Chem*. 2021;
20. Kumar R, Ailawalia P. Moving load response in micropolar thermoelastic medium without energy dissipation possessing cubic symmetry. *Int J Solids Struct*. 2007;