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Sustainable Energy and Chemical Engineering

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Editorial

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INTRODUCTION

Sustainable energy solutions are at the core of chemical engineering research today. With global energy demand increasing, chemical engineers play a critical role in renewable energy, storage, and carbon management technologies.

Key Research Areas

Biofuels Production: Conversion of biomass into ethanol and biodiesel [1].

Hydrogen Economy: Hydrogen as a clean alternative fuel [2].

Carbon Capture and Storage (CCS): Techniques to mitigate CO_2 emissions [3].

Solar Fuels: Chemical conversion of solar energy into fuels [4].

Energy Storage Materials: Electrochemical storage for grid applications [5].

REFERENCES

1. Demirbas A. Progress and recent trends in biodiesel fuels. Energy Conversion and Management. 2023; 49:14–34.
2. Turner JA. Sustainable hydrogen production. Science 2020; 305: 972–974.
3. Rochelle GT. Amine scrubbing for CO_2 capture. Science 2009; 325: 1652–1654.
4. Lewis NS, Nocera DG. Powering the planet with solar fuels. PNAS 2009; 103: 15729–15735.
5. Tarascon JM, Armand M (2001) Issues and challenges facing rechargeable lithium batteries. Nature. 2009; 686: 359–367.