Special Issue

Biogas Upgrading, Utilization, and Storage: Latest Advances and Perspectives

Message from the Guest Editor

- Biogas upgrading, utilization, and storage have become critical components in the global transition towards sustainable energy systems. Recent advances have focused on enhancing the efficiency, cost-effectiveness, and environmental performance of biogas technologies. Biogas upgrading involves the removal of impurities such as carbon dioxide (CO2), hydrogen sulfide (H2S), moisture, and siloxanes to produce biomethane with a high methane (CH4) content, suitable for grid injection or use as vehicle fuel. Emerging technologies, including membrane separation, cryogenic distillation, and advanced adsorption techniques, are driving improvements in energy efficiency and process reliability. Storage solutions are equally crucial, addressing the intermittent nature of biogas production and demand.
- This Special Issue will explore the latest technological developments, current challenges, and future perspectives in biogas upgrading, utilization, and storage, emphasizing the role of these technologies in achieving energy security and reducing greenhouse gas emissions.

Guest Editor

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