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Special Issue Reprint

Catalytic Reforming and Hydrogen Production: From the Past to the Future

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This Special Issue explores cutting-edge advances in catalytic reforming processes for sustainable hydrogen production, presenting eight original research articles and two comprehensive reviews. Topics include the dry reforming of methane (DRM), methanol steam and aqueous-phase reforming, bio-oil reforming, and photocatalytic hydrogen production. The studies reveal innovative catalytic systems, such as Ni-Ag and Ni-Ga, that enhance stability and reduce carbon deposition, while platinum-based catalysts and carbon supports optimize methanol reforming. Photocatalysts like Cu₂O/CuO and La-doped MoS₂ show promise for efficient solar-driven H₂ generation. The reviews delve into recent developments in methanol steam reforming and cobalt manganese spinels for hydrogen evolution and VOC degradation. Together, these contributions offer deep insights into catalyst design, reaction mechanisms, and future directions for efficient and scalable hydrogen technologies in the transition toward a low-carbon energy future.



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