



Photocatalytic Membrane Reactors

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Message from the Guest Editors

The advantages of photocatalysis can be significantly enhanced by coupling this process with membrane technology. Photocatalytic membrane reactors (PMRs) are hybrid systems of various configurations which combine photocatalysis with membrane separation taking advantages of both processes. PMRs have been found a promising tool for water/wastewater treatment and organic synthesis. Application of a membrane gives a possibility to realize a continuous operation with a simultaneous recovery of a photocatalyst (immobilized or in suspension), coupled with the photoreaction and separation of the substrates or (by)products from the reaction environment. Improvement of process efficiency compared to conventional photoreactors, modularity and easy scale up are some other potential advantages of PMRs. All of these resulted in a significant growth of interest in this area observed in the recent years.

