The functionality of ion exchange resins for esterification, transesterification and hydrogenation reactions

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ABSTRACT

Ion exchange resins (IER) possess a catalytically flexible structure which enables them to be easily applied for renewable energy production and environmentally friendly reactions. More specifically, they can be used as catalyst or catalyst support in other industrialized processes such as; esterification, transesterification and hydrogenation reactions. Several works on esterification, transesterification and hydrogenation reactions are in literature. This study reviews some of these works which includes the utilization of IER in esterification, transesterification and hydrogenation reactions. Recent reports show that IER are conventionally used as catalyst in esterification and transesterification reactions. For hydrogenation reactions, IER have been utilized as support for metallic catalyst, raising questions on their inability to be applied as catalyst. Hence, this study has itemized these various reactions, detailing their applications which are highly industrialized reaction processes.

KEYWORDS

Catalysis; Esterification; Hydrogenation; Ion exchange resins; Transesterification

ACKNOWLEDGEMENT

Osarieme Uyi Osazuwa is a recipient of Universiti Malaysia Pahang Post-Doctoral Fellowship. The authors gratefully acknowledge Universiti Malaysia Pahang for the provision of research grants with grant number RDU140357 and RDU130311.