



GLASSY ORGANIC FRAMEWORK ION-CONDUCTIVE MEMBRANES

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The Invention

UW-Madison researchers have developed a class of extremely robust yet inexpensive ion exchange membranes based on glassy organic frameworks. These membranes have shown promising performance for redox flow batteries and can replace conventional ion exchange membranes in other electrochemical systems, such as electrocatalysis, desalination, and secondary ion batteries. These new IEMs are made using a stepwise polymerization reaction and spin coated into a large area thin film. They offer high stability and ion selectivity with lower cost. Different structures (monomers, dopants) can be used to tune the pore size and pore surface polarity.

Tech Fields

- [Clean Technology : Energy storage, delivery & resource efficiencies](#)
- [Materials & Chemicals : Other materials & chemicals](#)

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867