
Solvation Structures and Dynamics in Nonaqueous Electrolytes

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Solvation-Property Relationship

Functional Properties

- Solubility of charged & uncharged species
- Chemical stability
- Viscosity & conductivity

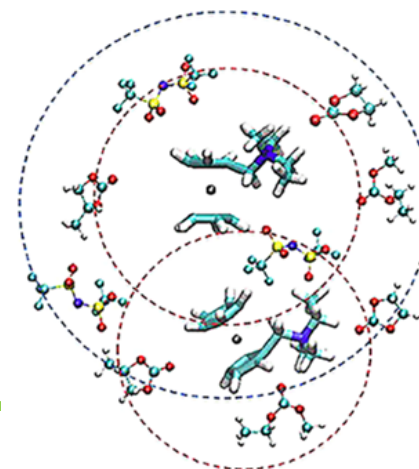
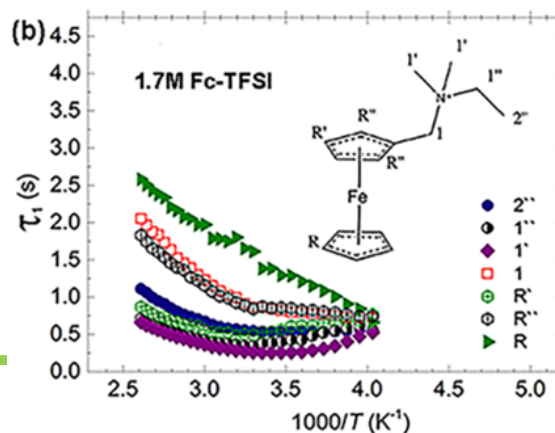
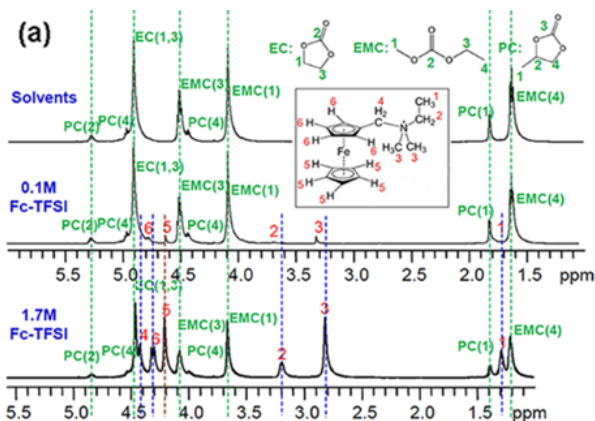
Solvation-property

Solvation Chemistry

- Solvation structures
- Ion pairing interactions
- Ligand exchange dynamics

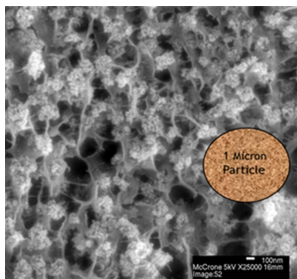
Characterizations

- Spectroscopic NMR, EPR, FTIR
- Computational DFT, MD
- Electrochemical analysis



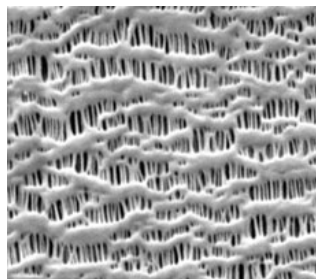
Membrane Separators

DAIRAMIC
A POLYPORE Company



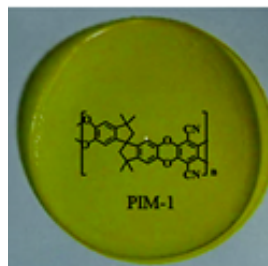
Anew. Chem. Int. Ed.
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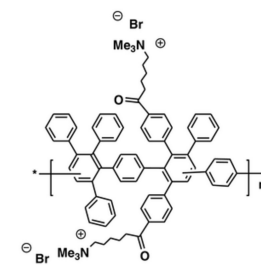
ACS Energy Lett. 2017, 2, 1156

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Angew.Chem. Int. Ed.
2017, 56, 1595

Ion exchange membrane



J. Electrochem. Soc.
2016, **163**, A5106

Pore structure

- Channel size
- Channel functionality
- Transport mechanism



Properties

- Selectivity
- Conductivity
- Stability