

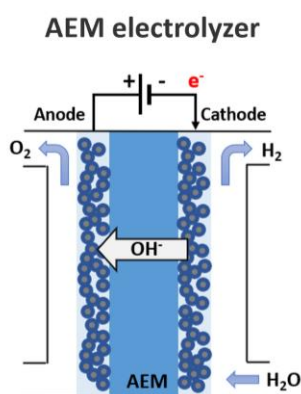
화학과 세미나

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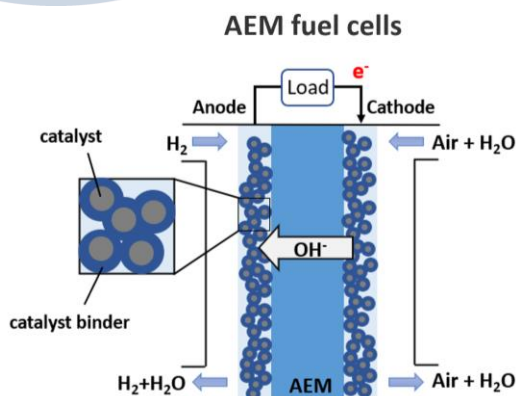
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Molecular Engineering of Anion Exchange Membranes for Hydrogen Fuel Cells and Water Electrolyzers

Ion-conducting polymers (called ionomers) are used as polymer electrolyte membranes which are a key component of electrochemical energy conversion and storage technologies such as fuel cells, electrolyzers, and flow batteries. The use of ion-conducting polymers in these electrochemical energy technologies has a long history but the lack of suitable low-cost, high-performance ion-conducting polymers has hampered wide adoption of these emerging energy technologies. In this presentation, we discuss some highlights from recent progress at the Bae group of Rensselaer Polytechnic Institute in the development of advanced ion-conducting (H^+ and OH^-) polymers, their state-of-the-art performance in fuel cells and water electrolyzers and technology transfer activity to commercialize materials for real world applications.



- Anode: $4OH^- \rightarrow O_2 + 2H_2O + 4e^-$
- Cathode: $4H_2O + 4e^- \rightarrow 2H_2 + 4OH^-$



- Anode: $2H_2 + 4OH^- \rightarrow 4H_2O + 4e^-$
- Cathode: $O_2 + 2H_2O + 4e^- \rightarrow 4OH^-$

Date : 2023년 12월 7일 (목) 오후 5시

Location : 과학관 B131호

Host : 연세대학교 화학과

