**Current Rectification and Diodes in Membrane Electrochemistry**

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Current rectification is a well-known process in electrochemical systems where an AC input results in a DC output.1 More recently current rectification has been found associated with nano-cone pores2 and even with single molecule devices.3

This tutorial lecture will attempt to link rectification phenomena and explore in particular ionic rectification in membranes.4 Ionic diode phenomena observed in Nafion5 and cellulose6 materials will be contrasted, characterization tools discussed, and future applications suggested.

References:

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