



Mediated Hydrogen Anode for Use in Reductive Electrosynthesis

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The Invention

The inventor discloses a new method and system for reductive electrochemical synthesis that uses H₂ as the terminal reductant. Essentially, this invention will enable H₂-integrated anodes and flow-reactor technology for reductive electrosynthesis. The invention, including potential classes of H₂ mediators, is summarized in the figure linked below.

Key Benefits

- Eliminates need for "sacrificial" anode
- Provides means to "supercharge" hydrogen as a stronger reductant

Additional Information

For More Information About the Inventors

- [Shannon Stahl](#)
- [Thatcher Root](#)

Publications

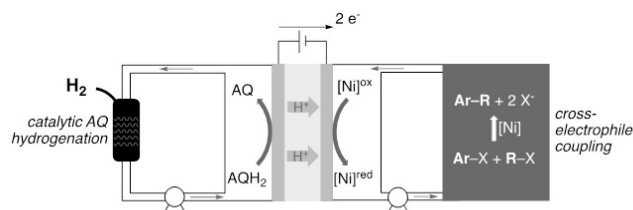
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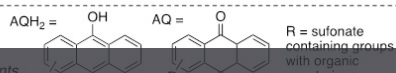
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Figures



Hydrogen carrier mediator:

- (a) facile hydrogenation
- (b) good electrochemistry
- (c) good solubility in relevant solvents



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