

Zinc Polypyrrole-air Sea Water Battery

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An environmentally friendly cell using polypyrrole-air regenerative cathode and zinc as anode, is investigated in the 3.5% sodium chloride solution for the possible applications as the sea water cell. It is shown that cell can deliver constant current in the range of tens of milliamps per gram of polypyrrole, and in the range of hundreds of milliamps under impulse discharge mod, with the cell voltage above 0.8 V, over significant period of time. It is suggested that cell could be considered, at least as a secondary power in a remote sensor buoy system for the monitoring shallow marine environments.

Keywords: Conducting polymers; Air regenerative cathode; Buoy; Metal-air battery

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