



Research Funding Opportunity

Program Title	Electrochemical Power Production and Energy Storage: – ARL Basic Scientific Research
Solicitation/RFP Code	BAA W911NF-07-R-0001
Funding Organization(s)	U. S. Army Research Laboratory
Funding Amount(s)	Undefined – proposal & area specific
Application Deadlines	Continuous through 30 September 2011

Program Summary

CFDA 12.431 – Basic Scientific Research

BAA RESEARCH AREA 2 - SENSORS AND ELECTRON DEVICES

2.44. Electrochemical Power Production and Energy Storage. The areas of technology of interest to ARL are:

- a. Active and Reserve Primary Batteries for Munitions Applications: Research of battery chemistries and battery designs capable of supplying power densities from 20 to 400 Watts/liter after 10 or more years of storage.
- b. Primary Lithium Batteries: Research of battery chemistries for cells and stacks of cells for man-portable applications, using environmentally-friendly materials and capable of providing better service than the Army's present general-purpose Li/SO₂ and Li/MnO₂.
- c. Rechargeable Li (Li Ion) Batteries: Research of chemistries for cells and stacks of cells using liquid or polymeric electrolytes and capable of providing specific energies greater than 120 Wh/kg, steady specific power greater than 50 W/kg, continuous and greater than 1kW/kg pulse, over the full military temperature range. Development of manufacturing technology for such batteries.
- d. Fuel Cells: Research of improved fuel cells for use with methanol-fuel, hydrogen generators and fuel reformers for use with hydrogen-fueled systems. Development of hydrocarbon fuel reformers, including desulfurizers and sulfur tolerant reformer catalysts to provide hydrogen for fuel cells. Development of medium and high temperature fuel cells for the use of hydrocarbon fuels or of impure hydrogen.
- e. Fast-Rise Pulse Power Capacitors: Research of film capacitor technology including the development of high energy dielectric films, impregnants, metallization and manufacturing technology for capacitors that can provide energy densities > 1.5 J/cc. And rise-times in the microsecond range.
- f. High Temperature Capacitors for Power Electronics: Research and development of high temperature polymeric dielectrics including process development for high temperature thin film manufacturing. The capacitors made of such thin film dielectric should be operable at temperatures over 90 degrees C.

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To view or download the full the full BAA go here: W911NF-07-R-0001