



## Nanostructured Metallomacrocycle Carbons

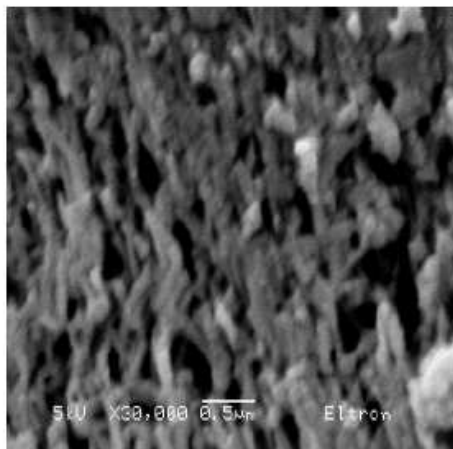
Eltron has developed a new class of materials comprised of metals incorporated into a nanostructured carbon framework. These materials are being considered and evaluated in a number of applications but show particular promise in use as cathode electrocatalysts for proton exchange membrane fuel cells (PEMFCs).

**Selected materials have exhibited:**

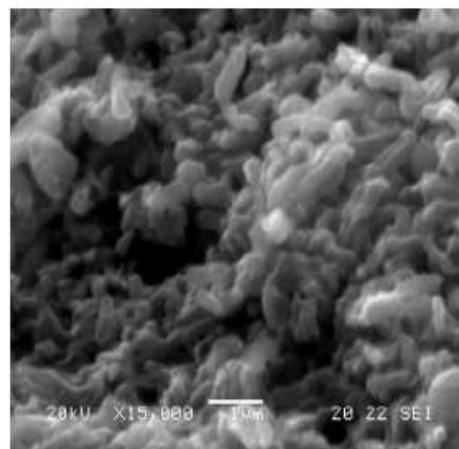
- 1) Approximately twice the power output per unit weight of metal than platinum,**
- 2) Complete insensitivity of cathodes incorporating the electrocatalyst to methanol, and**
- 3) Current cost about one-eighth that of carbon supported platinum catalysts.**

Another property of potential interest is that **the materials are completely insensitive to methanol** pointing to potential application in direct methanol fuel cells.

The figure below is representative of the materials in that morphology demonstrated at microscopic levels conforms to that of an inorganic template or mold.



**Mold**



**Nanostructured metalocarbon**

Specific surface areas exceeding 1000m<sup>2</sup>/g, pore diameters between 25 and 50Å, and pore volumes greater than 1 cm<sup>3</sup>/g have been obtained. The properties of the materials suggest their use in other applications, including other catalyses and electrocatalyses, as well adsorbent applications.

**Contact Us**

To discuss the possibility of entering into a business relationship with Eltron, contact the Business Development Group at [business@eltronresearch.com](mailto:business@eltronresearch.com).



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