Nickel-Silver Composition Shows Promise as Catalyst for H$_2$-O$_2$ Fuel Cells

In a continuing program of testing selected materials as catalysts for anodic oxidation of hydrogen in alkaline hydrogen-oxygen fuel cells, a carburized 3:1 Ni-Ag preparation was found to exhibit considerable catalytic activity. The uncarburized 3:1 Ni-Ag material showed only slightly less catalytic activity. The catalytic activity of the Ni-Ag materials tested, however, is not as high as that of the more costly and scarcer platinum black normally used in H$_2$-O$_2$ fuel cells.

Since low cost and ready availability of catalytic materials are important factors in the development of H$_2$-O$_2$ fuel cells for commercial use, further evaluation of the Ni-Ag materials with regard to various other properties (e.g., chemical and structural stability, long-term activity, and sensitivity to poisoning) would be warranted.

Note:
- Requests for further information may be directed to:
  Technology Utilization Officer
  Headquarters
  National Aeronautics
  and Space Administration
  Washington, D.C. 20546
- Reference: TSP70-10035

Patent status:
- Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.
- Source: J. A. Magerl and J. N. Murray of Allis-Chalmers Research Division under contract to NASA Headquarters (HQN-10565)