Fabrication of Porous Platinum Thin Films for Hydrocarbon Sensor Applications

K. D. Harris, J. R. McBride¹, K. E. Nietering¹ and M. J. Brett

Department of Electrical and Computer Engineering, University of Alberta, Edmonton, AB, Canada, T6G-2G7
¹Physics Department, Ford Research Laboratory, P.O. Box 2053 - MD3028, Dearborn, MI 48121

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We have demonstrated the fabrication of porous Pt films prepared by a new technique known as glancing angle deposition (GLAD). This method can be used to produce engineered thin films with high surface area, having microstructures typically characterized by high-aspect-ratio, nanometer-scale pillars. The catalytic efficiencies of selected samples were evaluated, and it was found that the GLAD-based Pt films exhibited catalytic properties superior to those of sputtered Pt films.