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## Production and Characterization of Highly Porous Nickel Foam

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### Abstract:

Open cell foams can be used in many industrial applications ranging from catalysts and sensors. These applications require high mechanical performance, resistance to corrosion and high temperature oxidation. Ni foams possess high thermal stability and potential for receiving thin film coat to increase their resistance. We have optimized the conditions of electroless nickel plating in order to establish more stable coating and higher deposition rate for production of higher quality deposit. The catalysts were characterized by means of SEM and EDS. The results showed that the obtained optimum process conditions are 20 g/L nickel sulfate, 25 g/L hypophosphite, 35 mL/L lactic acid, 25 g/L sodium acetate, pH value of 7-8 and reaction temperature of 80 °C. Under these technical conditions, the process had excellent bath stability.

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**Keywords:** *NI FOAM, ELECTROLESS NICKEL PLATING, CATALYST*

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