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## Electrochemical growing of Ni-MoO<sub>3</sub> nanocomposite coatings via redox mechanism

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### Abstract

The Ni-MoO<sub>3</sub> nanocomposite coatings with enhanced hardness and improved corrosion resistance as compared to bare nickel were grown by electrolytic co-deposition of nickel with spheroidal nanoparticles of MoO<sub>3</sub> synthesized via solvothermal method. It has been shown that the redox activity inherent in molybdenum trioxide makes it possible the composite growing at low concentration of oxide in the plating solution (below 3 g L<sup>-1</sup>) and ensures efficient overgrowing of the incorporated MoO<sub>3</sub> nanoparticles with matrix metal.

**Key words:** Metal-matrix nanocomposite; Electrodeposition; Molybdenum trioxide; Redox activity.

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