

**Название публикации:**

Formation of Superhard Chromium Carbide Crystal Microrods in Ni–Cr–C Systems

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**Аннотация:**

Ni–Cr–C materials with a high hardness determined by the presence of regions consisting of Cr<sub>3</sub>C<sub>2</sub> microrods with a record microhardness reaching 3200 kg/mm<sup>2</sup> have been obtained. Their self-organization in a powder consisting of Ni, Cr, and carbon microparticles with a high weight percentage occurs in the process of its sintering at a temperature of 1300°C and the subsequent sharp cooling of the resulting alloy. A model has been proposed for the process of formation of such crystal microrods whose characteristics have been determined by hardness measurement, electron microscopy, and microchemical and X-ray diffraction analyses.

**Ключевые слова:**

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