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From Para/Helimagnetic to Ferromagnetic Transition of Pulsed Laser Deposited Fe1-xCoxSi Thin Films

We report pulsed laser deposition synthesis and characterization of polycrystalline Fe1-xCoxSi thin films on Si (111). Ferromagnetism with significant magnetic hysteresis is found for all films including nominally pure FeSi which reveals trasition from paramagnetic and helimagnetic to ferromagnetic for Fe1-xCoxSi for FeSi and Co doped FeSi.

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