

Abstract Submitted
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Ferromagnetic Fe₂CrAl Nanowires¹ RAJENDRA DULAL, BISHNU DAHAL, IAN L PEGG, JOHN PHILIP, The Catholic University of America — Heusler alloy Fe₂CrAl (FCA) nanowires were grown on silicon substrates. Nanowires have diameters in the range 50 to 200 nm and lengths up to 100 μm. They exhibit cubic L₂₁ and A₂ type structure with a space group, Pm 3̄m. Magnetic characterization reveals that they display ferromagnetic behavior and has a Curie temperature above 400 K. Magnetic behavior of FCA nanowires is different from the reported bulk behavior. Bulk FCA with L₂₁ structure has a Curie temperature around 274 K.

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