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Fe/Me bimetallic nanostructures: synthesis and magnetic properties

Recently much attention has been placed on fabrication and magnetic properties of bimetallic Fe/Me nanostructures both from scientific and technological interests owing to their potential applications in ultrahigh density magnetic recording media, medical diagnostics, environmental remediation and high-performance permanent magnets. In this study, the Fe/Au and Fe/Pt nanoparticles were synthesized from metallic rods by using a simple and one-step method - pulsed plasma in liquid. As-synthesized nanoparticles were exposed for structural and morphological analysis. The nanoparticles' ferromagnetic behavior at room temperature was studied by the Vibrating Sample Magnetometer (VSM) and SQUID analysis and obtained results were discussed.

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