

Abstract Submitted
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Synthesis and Characterization of Gadolinium-Doped Magnetite

JOSHUA WYLIE, RONALD TACKETT, Kettering University — Since the emergence of magnetic fluid hyperthermia as a treatment modality for difficult to treat cancers such as glioblastoma multiformae, the need to understand the behavior of the materials involved has become paramount. Although materials like magnetite (Fe_3O_4) are commonly processed into ferrofluids for use in this treatment, the search for materials with higher magnetic susceptibility and heating ability drives much of the current research. The synthesis of gadolinium-doped magnetite nanoparticles via chemical co-precipitation and electrochemical deposition, and their effects on ferrofluid performance will be presented and compared.

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None

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