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## Magnetic characterization of the phase transformations during synthesis of the FeWO<sub>4</sub> nanoparticles using WS<sub>2</sub> nanotubes

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With the aim to orienting WS<sub>2</sub> nanotubes in molten polymer phases by application of a magnetic field, a new synthetic strategy was used to decorate the surface of WS<sub>2</sub> nanotubes with FeWO<sub>4</sub> nanoparticles. Nanoparticles FeWO<sub>4</sub> were obtained by depositing amorphous iron oxide film onto surface of the WS<sub>2</sub> nanotubes with subsequent high temperature annealing. Some different phases are forming during the process of phase transformations and they definitely manifest themselves by their different magnetic properties. The nanotubes could be oriented by moderate magnetic field (0.3 T) in low viscosity fluids like ethanol.

### Biography

Gregory Leitus is an associated Staff Scientist at Weizmann Institute of Science. He has his expertise in Material Science, especially in the fields of "Magnetic and superconducting properties of materials, magnetic and electric transport measurements and crystallography". He is the Co-author of 165 publications in reviewed scientific journals.

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