

## We're actively looking for new researchers!

Become part of an exciting new area of Canadian science with fantastic research and job opportunities. Satisfy both your curiosity for fundamental physics and that itch for applied science by joining the University of Manitoba's **Nanomagnetism Research Group (NRG)**.

The **Nanomagnetism Research Group** has two basic thrust areas:

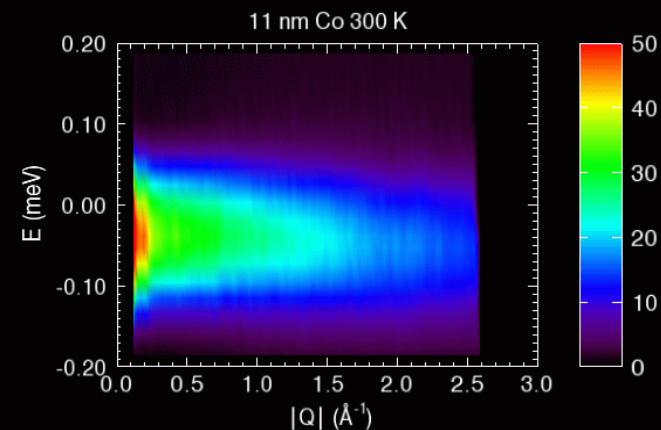
- 1) To understand the surface, core and interaction properties of magnetic nanoparticles with sizes 1-100 nm.
- 2) To use nanoparticle assemblies to design systems that exhibit a fundamentally new regime of magnetism.

We are also working towards biological applications of magnetic nanoparticles (e.g. **selective targeting drug therapy**). The NRG is also actively working on magnetism in **thin-film nanoscale systems** that have a direct relevance to technological applications (e.g. magnetic recording industry).

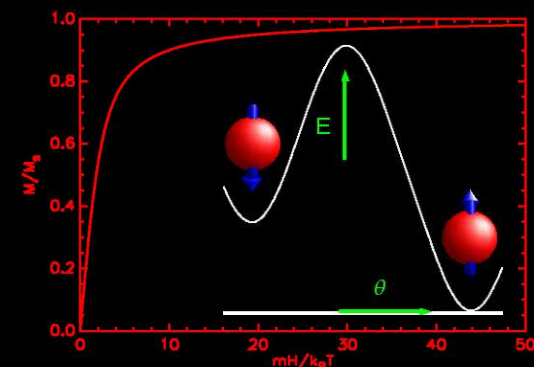
Don't miss this opportunity to join a vibrant new research group in the emerging field of nanomagnetism! For more information, contact Dr. Johan van Lierop ([johan@physics.umanitoba.ca](mailto:johan@physics.umanitoba.ca)).



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Nanomagnetism experiment & theory



Chemical nanoparticle synthesis & assembly





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Dear Undergraduate Researcher,

The Nanomagnetism Research Group (NRG) is engaging in innovative research to create novel metamaterials – artificially fabricated structures or mediums that exhibit unique properties not found in nature – using new nanoparticle chemical synthesis techniques. This NRG summer research program will include components of chemical sample synthesis, composition, structural and magnetic characterization. Data visualization, analysis and simulation may also be elements of this research program.

Put those newly developed laboratory skills to use, and learn some new science at the same time. Don't miss this opportunity to join a vibrant new research group in the emerging field of nanomagnetism!

For more information, contact Dr. Johan van Lierop ([johan@physics.umanitoba.ca](mailto:johan@physics.umanitoba.ca)).