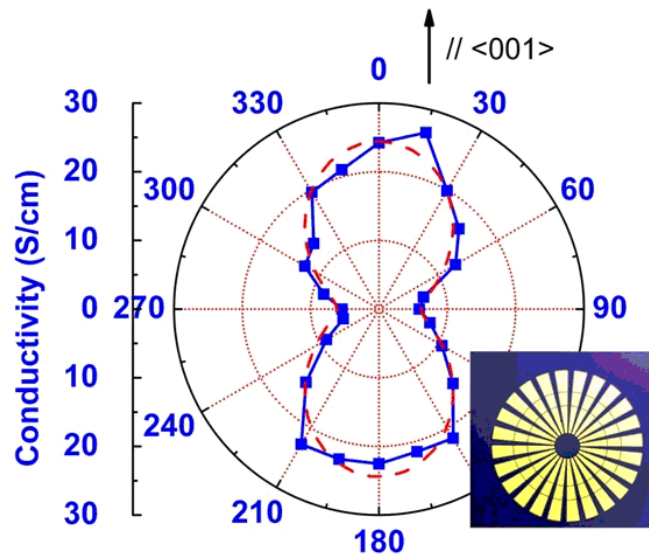


# Nanoelectronics Research



Our group has a strong interest in the metal-insulator transition of vanadium dioxide (VO<sub>2</sub>). VO<sub>2</sub> is a paradigm of strongly correlated oxides and shows many intriguing properties that are still not understood and remain great intellectual challenges. Learning the fundamental rules behind these correlations will pave the way toward designing and fabricating new generations of materials whose behaviors are predictable and perhaps even useful. Another focus of our research is on multiferroic thin films which are of great interest for next generation Spintronics. Multiferroic materials have the combination of magnetic, electric dipole, and/or strain ordering. The coupling between magnetization and electric polarization in the multiferroics could lead to new flexible functionalities for future logic and memory devices.

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*"Pursuing the applications of multifunctional complex oxide thin films in logic and memory devices."*



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