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Dynamical mean field study of ferromagnetism and correlation strength in cubic barium ruthenate: results and comparison to strontium and calcium ruthenate QIANG HAN, Department of Physics, Columbia University, New York, New York 10027, USA, HUNG DANG, Institute for Theoretical Solid State Physics, JARA-FIT and JARA-HPC, RWTH Aachen University, 52056 Aachen, Germany, ANDREW MILLIS, Department of Physics, Columbia University, New York, New York 10027, USA — We present density functional plus dynamical mean field studies of cubic BaRuO₃ using interaction parameters previously found to be appropriate for the related materials CaRuO₃ and SrRuO₃. The calculated trends in material properties across this family of compounds are in good agreement with experiment and the results provide insights into the origin of magnetism and the role of the van Hove singularity in the physics of Hund's metals.

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