

Abstract Submitted
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Interplay of chemical pressure and spin degrees of freedom on the magnetic properties of the $A\text{Ag}_2M[\text{VO}_4]_2$ type of compounds¹ ANGELA MÖLLER, NGOZI AMUNEKE, PHILLIP DANIEL, DANA GHEORGHE, Department of Chemistry and Texas Center for Superconductivity, University of Houston, TX, USA, BERND LORENZ, Texas Center for Superconductivity and Department of Physics, University of Houston, TX, USA — A series of layered compounds of the $A\text{Ag}_2M[\text{VO}_4]_2$ type of structures, featuring the magnetic ions on a triangular lattice, have been synthesized by solid state reactions. Studies on the interplay of i) the chemical pressure induced by the differences in cation sizes ($A^{II} = \text{Sr}, \text{Ba}$) and ii) the spin system ($M^{II} = \text{Mn}, \text{Co}, \text{Ni}, \text{Cu}$) provide further insights into the structure-properties relationships which have been investigated by specific heat and magnetization measurements. Furthermore, spectroscopic methods have been employed to evaluate vibrational and electronic structural aspects in detail.

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