

Abstract

Spin Glass Behavior in Metalloporphyrin-based Magnets¹

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Magnets are technologically very important materials that are essential in today's high-tech society. One new class magnets being studied is based on manganoporphyrins. Bulk magnetic ordering is observed with ordering temperatures, T_c , occurring below 30 K depending on the substituent, solvent, etc. Typically, this class of magnets exhibit frequency dependent ac magnetic susceptibility characteristic of spin glass behavior. Although spin glass behavior is well studied it is for spin dilute systems, it is not for spin concentrated, systems. Experimental data characteristic of the spin glass behavior will be presented, and the data will be discussed in terms of a novel viscous glassy behavior in a quasi-one-dimensional cluster glass.

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