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Multifrequency EPR and DENR of polyacetylene composite

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Abstract

The organo-inorganic composite MoCl1.9 ± 0.1(C 30 ± 1H30 ± 1), a product of interaction of MoCl5 with C2H2, has been studied by X- and W-band EPR, double electron nuclear resonance, and W-band electron spin echo spectroscopy. The composite consists of nanosized organometallic molybdenum clusters in the polyacetylene matrix. It has been shown that the composite contains three types of magnetic centers: the first is related to the existence of paramagnetic molybdenum atoms in the polyacetylene matrix, and the other two are paramagnetic defects of the matrix. © 2013 Pleiades Publishing, Ltd.

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