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Magnetic behaviour of the Bi$_{2-x}$Sr$_x$Ir$_2$O$_7$ pyrochlore CARLOS COSIO-CASTANEDA, OLIVER MARTINEZ-ANAYA, GUSTAVO TAVIZON, Facultad de Quimica, PABLO DE LA MORA, Facultad de Ciencias, FRANCISCO MORALES-LEAL, ROBERTO ESCUDERO, Instituto de Investigaciones en Materiales — Compounds of the Bi$_{2-x}$Sr$_x$Ir$_2$O$_7$ solid solution have been synthesized by the solid state reaction method. Structural modifications as well the valence states of Iridium have been studied as a function of the strontium content by Rietveld refinements and electrochemical analytical methods. Electrical properties of Bi$_{2-x}$Sr$_x$Ir$_2$O$_7$ show single phase and metallic behaviour in the whole range of compositions. Magnetically this system behaves as a Curie-Weiss paramagnet from 2-300 K. the magnetic moment suggests the presence of Ir$^{5+}$ valence state.

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