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【166】RNiO3 (R = LaxPr1-x ; x = 0.1 to 1.0) perovskites at the extreme: Where Metal-Insulator Transition reaches 0K

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RNiO3 (R = trivalent rare earth ions) perovskites are a unique class of materials, where structural, electric and magnetic transitions are directly linked to the size of the incorporated rare earth ion. The transitions are temperature dependent, which allows a systematic study. Of special interest in this series is where the transition point reaches 0K, which creates a frustrated system with several coexisting properties. With the unique equipment at PSI in Villigen we are able to synthesize RNiO3 at high temperatures (up to 1200 ℃) and high O2 pressures (up to 2 kbar) in a scale of 5-10 g, suitable for **neutron experiments**. La/Pr perovskites of the type RNiO3 (R = LaxPr1-x ; x = 0.1 to 1.0) are presented.

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