Title:	Na2IrO3 as a novel relativistic mott insulator with a 340-meV gap
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Abstract:	We study Na2IrO3 by angle-resolved photoemission spectroscopy, optics, and band structure calculations in the local-density approximation (LDA). The weak dispersion of the Ir 5d-t2g manifold highlights the importance of structural distortions and spin-orbit (SO) coupling in driving the system closer to a Mott transition. We detect an insulating gap Δgap≃340 meV which, at variance with a Slater-type description, is already open at 300 K and does not show significant temperature dependence even across TN≃15 K An LDA analysis with the inclusion of SO and Coulomb repulsion U reveals that, while the prodromes of an underlying insulating state are already found in LDA+SO, the correct gap magnitude can only be reproduced by LDA+SO+U, with U=3 eV. This establishes Na2IrO3 as a novel type of Mott-like correlated insulator in which Coulomb and relativistic effects have to be treated on an equal footing.
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