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Electronic Structures of Na in  $Na_xCoO_2$  PAOAN LIN, Institute of Physics, Academia Sinica, Taiwan, D. J. HUANG, Natinal Symchrotron Radiation Research Center, HORNG-TAY JENG, Institute of Physics, Academia Sinica, Taiwan, CHEN-SHIUNG HSUE, Department of Physics, National Tsing Hua University, Taiwan — Sodium cobalt oxides  $(Na_xCoO_2)$  have attracted renewed because of their exceptionally large thermoelectric power recent discovery of superconductivity in their hydrated counterparts. In order to investigate the dependence on the dopingconcentration for the electronic structures, we hav carried out a series of LDA+U Ab initio calculation on sod cobalt oxides  $(Na_xCoO_2)$  of various dopings. The calcul results were compared with experimental results of polarization-dependent soft x-ray absorption spectroscopy.

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