

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

X-ray absorption spectroscopy of graphite oxides HAE-KYUNG JEONG, BK21 Physics Division, Center for Nanotubes and Nanostructured Composites, Sungkyunkwan University, LEYLA COLAKEROL, Department of Physics, Boston University, Boston, MA 02215, USA, HAN-JIN NOH, Department of Physics, Chonnam National University, Gwangju 500-757, Korea, YUN PYO LEE, MEI HUA JIN, BK21 Physics Division, Center for Nanotubes and Nanostructured Composites, Sungkyunkwan University, PER-ANDERS GLANS, Department of Physics, Boston University, Boston, MA 02215, USA, JAE-YOUNG KIM, Pohang Accelerator Laboratory & Department of Physics, POSTECH, KEVIN E. SMITH, Department of Physics, Boston University, Boston, MA 02215, USA, CHONG YUN PARK, YOUNG HEE LEE¹, BK21 Physics Division, Center for Nanotubes and Nanostructured Composites, Sungkyunkwan University — We have investigated electronic structures of graphite oxide using x-ray absorption spectroscopy at carbon and oxygen K-edges. Unoccupied states such as π^* and σ^* states originating from sp^2 hybridization in graphite are also visible in the graphite oxide, even though the graphite oxide experiences a severe oxidation. Additional electronic states of the graphite oxide compared to that of pure graphite are ascribed to the functional groups such as epoxide, carboxyl, and hydroxyl groups that are present in the graphite oxide.

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Date submitted: 05 Dec 2007

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