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Coverage Dependent X-ray Photoemission on Halogenated Benzene on Graphite[1] KEISUKE FUKUTANI, NING WU, University of Nebraska-Lincoln, PETER DOWBEN, Univeristy of Nebraska-Lincoln — We studied the adsorption of isomers of halogenated benzene on graphite. We found difference in the behavior of three different symmetry types, (1,2), (1,3), and (1,4), of diiodobenzene ($C_6H_4I_2$) and 1,4-bromoiodobenzene (C_6H_4IBr) adsorbed on graphite surface at 95K by X-ray photoemission spectroscopy. Although the molecules are expected to be similar in their electronic structure, the sticking coefficients and the strength of screening effects are considerably different for the different isomers. We find evidence for different intermolecular interactions both in the initial state and in the final state as well. Symmetry, not simply the the chemical constituents, play a role in adsorbate chemistry.

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