

**SPONTANEOUS SYMMETRY BREAKING BY DOUBLE
LITHIUM ADSORPTION IN POLYACENES AND CARBON SHEETS**

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I show that adsorption of one lithium atom to polyacenes, i.e. chains of linearly fused benzene rings, will cause such chains to be slightly deformed. If adsorb a second identical atom on the opposite side of the same ring, this deformation is dramatically enhanced despite the fact that a symmetric configuration seems possible. I argue, that this may be due to an instability of the Jahn-Teller. I show how to extend this study to carbon sheets.