

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Dynamical Jahn-Teller instability in metallic fullerenes** NAOYA IWAHARA, LIVIU CHIBOTARU, Theory of Nanomaterials Group, Katholieke Universiteit Leuven — Dynamical Jahn-Teller effect has escaped so far direct observation in metallic systems. It is particularly believed to be quenched also in correlated conductors with orbitally degenerate sites such as cubic fullerenes. Here the Gutzwiller approach is extended to treat electron correlation over metals with Jahn-Teller active sites and applied to the investigation of the ground state of  $K_3C_{60}$  [1]. It is shown that dynamical Jahn-Teller instability fully develops in this material when the interelectron repulsion  $U$  on  $C_{60}$  sites exceeds some critical value. The latter is found to be lower than the current estimates of  $U$ , meaning that dynamical Jahn-Teller effect takes place in all cubic fullerenes. This leads to strong splitting of LUMO orbitals on  $C_{60}$  sites and calls for reconsideration of the role of orbital degeneracy in the Mott-Hubbard transition in fullerenes.

[1] N. Iwahara and L. F. Chibotaru, submitted to Phys. Rev. B.

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Date submitted: 11 Nov 2014

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