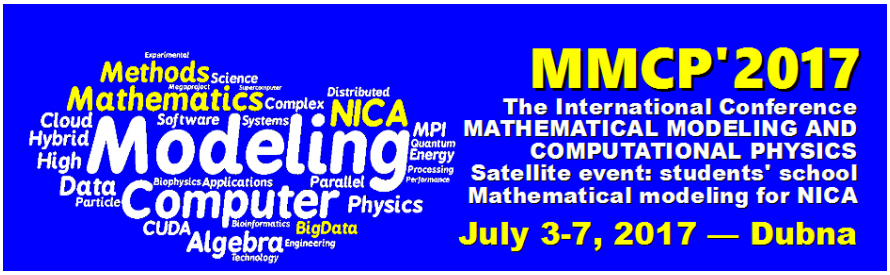

Contribution ID: **118** Type: **not specified**

Numerical modelling of normal and superconducting properties of the doped graphane

Thursday, 6 July 2017 13:30 (15 minutes)

The normal properties of graphane with various degrees of doping are calculated with the help of the generalized Eliashberg theory. Within the theory of strong electron-phonon interaction, a superconducting order parameter of the doped graphane has been found. The classical approach for determining the critical temperature of a superconducting transition as a result of a strong electron-phonon interaction does not involve calculating the renormalization of the density of electronic states and the chemical potential. In this work the critical temperature of superconductivity of graphane has been calculated as a function of the doping degree taking into account the renormalization of the electron mass, the chemical potential, and the density of electronic states.

Acknowledgement

This work was supported by the Ministry of Education and Science of the Russian Federation(base part of state task, project no. 1.9746.2017/BCh)

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Session Classification: Physical processes modeling and related computational methods (III)