

# The gallium and its alloys wettability of carbon structures after their intercalation by alkali metals

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The intercalation of highly oriented graphite by potassium atoms was carried out by a two-zone method. As a result, the structure of KC<sub>72</sub> was obtained, which is confirmed by the Raman spectra. Gallium microdroplets were deposited on the intercalated graphite surface, and the contact angles were measured using scanning electron microscopy. The decreasing the contact angle from 85 to 45 ° took place when the size of gallium droplets change from 5.4 to 1.43 μm. The experimentally found values of contact angles are compared with the Young-Dupre equation, where free surface and interface energies were found in frame of Thomas-Fermi model [1] with the electron densities fitted by compaering with calculations by Quantum Espresso program. The excimer laser was applied for doping boron atoms in silicium [2]. We have considered metalatoms intercalation of HOPG using femtosecond laser pulses.

## Acknowledgments

This work was supported by grant from President of the Russian Federation for state support of young Russian scientists—candidates of science (No. MK-927.2022.1.2)

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