

# 3<sup>rd</sup> International Conference and Exhibition on Materials Science & Engineering

October 06-08, 2014 Hilton San Antonio Airport, USA

## Engineering new carbon materials

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The given work briefly reports on the history synthesis of new type carbon materials having no analogs in the world, which provides essential reducing of power losses in lubricated tribounits.

Efficiency of these new carbon materials is based on the established by the authors of the work fact that the carbon coatings with monocrystalline or polycrystalline highly ordered structures and linear chains of carbon increase essentially the level of molecular ordering in lubricating boundary layers and ensure adsorption of boundary layers on the coatings. Boundary layers repeat highly ordering structure preset by surface of the coating what re-sults in lubricating ability improving, boundary layers thermal stabilization, extending the ranges of operating temperatures of oils, etc. Besides, using the mentioned coatings allows lowering the number of additives in lube oils.

Orientation effect of coatings under consideration on molecular ordering in boundary lube layers and correspondingly, lubricity improving, which was established early on some model oils, now is demonstrated as applied to commercial lube oils and cutting fluids in gyrosopes and extrusion tread instrument.

The authors of the this work made a set of many theoretical and experimental studies in-cluding synthesis of coatings, analysis of coatings structure, tribological tests of nanocoatings with various oils, etc.

## Biography

Vladimir A Levchenko has completed his PhD from Mechnikov Odessa State University and Postdoctoral studies from Lomonosov Moscow State University. He is leading Researcher of Lomonosov Moscow State University and the Director of Nanotribology Center LMSU - BIES RAS (Lomonosov Moscow State University Blagonravov Institute of Engineering Science, Russian Academy of Sciences). He has published more than 210 papers in reputed journals and serving as an editorial board member of reputed. He is the author of more than 20 inventions in different spheres (medicine, machine engineering, energetic).

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