

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Electrochemistry and molecular sensing in layered materials

NIKITA REPNIN, ARTEM BASKIN, POYA YASAEI, REZA HANTEHZADEH, BIJANDRA KUMAR, PETR KRAL, AMIN SALEHI-KHOJIN, Univ of Illinois - Chicago — We combine experimental and computational techniques to study electrochemistry in solvated MoS₂. We show that MoS₂ has a high catalytic activity for important industrial reactions. In a similar way, we investigate electronic transport properties of functionalized graphene with adsorbed molecules. We show that well designed nanostructures can lead to novel detection mechanisms with a very high molecular sensitivity.

Nikita Replin
Univ of Illinois - Chicago

Date submitted: 14 Nov 2013

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