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Controlling the optoelectronic and anti-icing properties of two-dimensional materials by functionalization

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Propositions

accompanying the thesis

Controlling the optoelectronic and anti-icing properties of two-dimensional materials by functionalization

by

Ali Syari'ati

1. The spectroscopic fingerprint of defects helps to understand covalent functionalization of two-dimensional materials.
This thesis
2. Controlling source concentration during the chemical vapor deposition process plays an important role in obtaining full coverage of the substrate with single layer MoS₂. *Chapter 3*
3. Covalent functionalization of MoS₂ can heal defects, which are always present when a monolayer of this material is grown by chemical vapour deposition. *Chapter 4*
4. Covalent functionalization of single layer MoS₂ can be used to alter its optoelectronic properties. *Chapter 5*
5. Graphene oxide deposited by the Langmuir Schaefer method on silicon oxide can decrease the freezing onset temperature on this surface. *Chapter 6*
6. Getting a Ph.D. is not just a title but a journey that shapes you.
7. The value of international working conditions comes from different cultures, perceptions, communication and working styles, and other variety that complete the beauty of work and social spheres. *Nature 579, 169-170 (2019)*
8. Sending scholars abroad is a good initiative to decrease the big science gap in Indonesia.
9. Building a family is about shifting the word "I" into "We".
10. A good badminton player is like a Ph.D. researcher; they should know when to do a drop shot or a powerful smash.