

MoS₂ as a catalyst

Anna Panagiota Souri
University of Crete, Physics department

Molybdenum disulphide is an inorganic compound composed of molybdenum and sulfur. Its chemical formula is MoS₂. The compound is classified as a transition metal dichalcogenide. MoS₂ is an efficient catalyst for hydrogen evolution including the electrolysis of water [1]. Advanced materials for electrocatalytic and photoelectrochemical water splitting are central to the area of renewable energy. Hence MoS₂ is a promising electrocatalyst [2] for hydrogen production. In this talk I will focus on the catalytic properties of MoS₂ and on certain applications, found from bibliography, describing different creation techniques of the material.

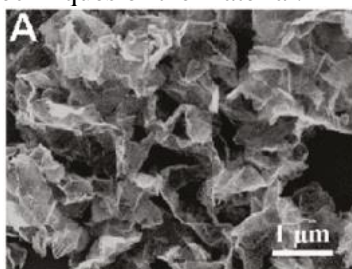


Figure 1: SEM image of MoS₂ nanoparticles on reduced graphene oxide sheet [2]

References

- [1] Chang Kun et al. (2014) MoS₂/graphene cocatalysts for efficient photocatalytic H₂ evolution under Visible Light Irradiation, ACS NANO 7078-7087
- [2] Li Yanguang et al. (2011) MoS₂ Nanoparticles Grown on Graphene: An Advanced Catalyst for the Hydrogen Evolution Reaction, Journal of the American chemical society 7296-7299