

## REFERENCE

- A. Conan, A. Bonnet, A. Amrouche and M. Spiesser. (1984). Semiconducting properties and band structure of MoTe<sub>2</sub> single crystals. *Journal de Physique*, vol. 45, 459-465.
- C. Lee, W. Yang and R. G. Parr. (1988). Development of correlation-energy formula into a functional of the electron density. *Physical Review B* **37** (2), 785-789.
- D. O. Cowan, J. A. Fortkort and R. M. Metzger. (1990). Lower-Dimensional Systems and Molecular Electronics. *Plenum Press, New York*,.
- D. Puotinen and R. E. Newnham. (1961). The crystal structure of MoTe<sub>2</sub>. *Acta Crystallographica* **14** (6), 691-692.
- E. Bianco, S. Butler, S. Jiang, O. D. Restrepo, W. Windl and J. E. Goldberger. (2013). Stability and Exfoliation of Germanane: A Germanium Graphene Analogue. *ACS Nano* **7** (5), 4414-4421.
- E. Yablonovitch. (1987). Inhibited Spontaneous Emission in Solid-State Physics and Electronics. *Physical Review Letters* **58** (20), 2059-2062.
- G.-B. Liu, D. Xiao, Y. Yao, X. Xu and W. Yao. (2015). Electronic structures and theoretical modelling of two-dimensional group-VIB transition metal dichalcogenides. *Chemical Society Reviews* **44** (9), 2643-2663.
- I. G. Lezama, A. Arora, A. Ubaldini, C. Barreateau, E. Giannini, M. Potemski and A. F. Morpurgo. (2015). Indirect-to-direct Band Gap Crossover in few-layer MoTe<sub>2</sub>. *Nano Lett.*
- J. Li, N. V. Medhekar and V. B. Shenoy. (2013). Enhanced charge carrier mobility in two-dimensional high dielectric molybdenum oxide. *The Journal of Physical Chemistry C* **117** (30), 15842-15848
- K. K. Kam, C. L. Chang and D. W. Lynch. (1984). Fundamental absorption edges and indirect band gaps in MoSe<sub>2</sub>. *Journal of Physics C: Solid State Physics* **17** (22), 4031.
- Liu,Z.P. and Xu,F.Z. (2014). Graphene: Energy Storage and Conversion Applications. *USA:CRC Press*

- L. C. Towle, V. Oberbeck, B. E. Brown† and R. E. Stajdohar. (1966). Modulation of electronic properties from stacking orders and spin-orbit coupling for 3R-type MoSe<sub>2</sub>. *Science* **154** (3751), 895-896
- M. Hosseini, M. Elahi, M. Pourfath and D. Esseni. (2015). Very large strain gauges based on single layer MoSe<sub>2</sub> and WSe<sub>2</sub> for sensing applications. *Applied Physics Letters* **107** (25), 253503
- O. Hassel. (1925). Zeitschrift fuer Kristallographie, Kristallgeometrie, Kristallphysik, Kristallchemie **61**. *Crystallography Open Database*.
- Perreault, F., Faria, A.F. and Elimelech, M. (2015). Environmental Applications of Graphene-based Nanomaterials. *Chemical Society Reviews*. **44** (16):5861-5896
- Rajeswari, J. , Kishore, P.S. , Viswanathan, B. and Varadarajan, T.K. 2009. One-dimensional MoO<sub>2</sub> Nanorod for Supercapacitor Applications. *Electrochemistry Communications*. **11**(3):572–575
- Rumyantsev, S.L. , Jiang, C. , Samnakay, R. Shur, M.S. and Balandin, A.A. 2015. 1/f Noise Characteristics of MoS<sub>2</sub> Thin Film Transistor: Comparison of Single and Multilayer Structures. *IEEE Electron Device Letters*. **36**(5):517-519
- R. Doolen, R. Laitinen, F. Parsapour and D. F. Kelley. (1998). Trap State Dynamics in MoS<sub>2</sub> Nanoclusters. *The Journal of Physical Chemistry B* **102** (20), 3906-3911
- R. Gautier, E. Furet, J.-F. Halet, Z. Lin, J.-Y. Saillard and Z. Xu. (2002). Electronic structures of electron-rich octahedrally condensed transition-metal chalcogenide clusters. *Inorganic chemistry* **41** (4), 796-804
- R. F. Frindt. (1963). The optical properties of single crystals of WSe<sub>2</sub> and MoTe<sub>2</sub>. *Journal of Physics and Chemistry of Solids* **24** (9), 1107-1108
- S. Tongay, J. Zhou, C. Ataca, K. Lo, T. S. Matthews, J. Li, J. C. Grossman and J. Wu. (2012). Thermally driven crossover from indirect toward direct bandgap in 2D semiconductors: MoSe<sub>2</sub> versus MoS<sub>2</sub>. *Nano Letters* **12** (11), 5576-5580
- Tomberg, A. (2015). An Introduction to Computational Chemistry using G09W and Avogadro Software. Gaussian 09W Tutorial. [www.mocalx.com.cn/wp-content/uploads/2015/01/Gaussian09W\\_tutorial.pdf](http://www.mocalx.com.cn/wp-content/uploads/2015/01/Gaussian09W_tutorial.pdf).
- Y. Cheng and U. Schwingenschlögl. (1963). *MoS<sub>2</sub>: Materials, Physics and Devices*, 1 ed. (Springer International Publishing, 2016).

Z. Chen, H. Liu, X. Chen, G. Chu, S. Chu and H. Zhang. (2016). Large-Area Epitaxial Monolayer MoS<sub>2</sub> *ACS Applied Materials & Interfaces* **8** (31), 20267-20273.