

DAFTAR PUSTAKA

- Aleksey, F., Qiran, C., Elton J.G. Santos, Declan, S., Dong, Q., Rui, Z., Shao-ming, H., Lu, H. L., Kenji, W., Takashi, T., Matthew, R. B., Ying, C., Zhi, Y., Rodney S. R., 2016, Mechanical Properties of Atomically Thin Boron Nitride and The Role of Interlayer Interactions, *Nat. Commun* 8:15815, 1-9.
- Azevedo, S., Kaschny, J. R., de Castilho, C. M. C. Mota, F. de Brito, 2009, Electronic structure of defects in a boron nitride monolayer, *Eur. Phys. J B* 67, 507-512.
- Bhinamapati, G. R., Glavin, N. R., Robinson, J. A., 2016, 2D Boron Nitride: Synthesis and Applications, *Semiconductors and Semimetal* 95, 101-139.
- Chadi, D. J. dan Chang, K. J., 1988, Magic Numbers for Vacancy Aggregation in Crystallin, *Phys. Rev. B* 38, 1-3.
- Cretu, O., Lin, Y. C., Suenaga, K., 2014, Evidence for Active Atomic Defects in Monolayer Hexagonal Boron Nitride: A New Mechanism of Plasticity in Two-Dimensional Materials, *Nano Lett.* 14, 1064-1068.
- David S. Sholl dan Janice A. Steckel, 2009, *Density Functional Theory: A Practical Introduction*, John Wiley and Sons Inc., Hoboken, Kanada.
- Du, A., Chen, Y., Zhu, Z., Amal, R., Lu, G. Q., Smith, S. C., 2009, Dots versus Antidots: Computational Exploration of Structure, Magnetism, and Half-Metallicity in Boron-Nitride Nanostructures, *J. Am. Chem. Soc.* 131, No. 47, 17351-17354.
- El-Barbary, A. A., Telling, R. H., Ewels, C. P., Heggie, M. I., Briddon, P. R., 2003, Structure and Energetics of the Vacancy in Graphite, *Phys. Rev. B* 68, 144107.
- Fard, M. S., Bayat, A., Kamath, G., 2018, Effect of Mono-Vacant Defects on The Opto-Electronic Properties of Ionic Liquid Functionalized Hexagonal Boron-Nitride Nanosheets, *J. Mol. Liq.* 249, 1172-1182.
- Fartab, D. S. dan Kordbacheh, A. A., 2018, Lithium doping and vacancy effects on the structural, electronic and magnetic properties of hexagonal boron nitride sheet: A first-principles calculation, *Superlattice. Microst.* 118, 185-195.

- Fujimoto, Y., Koretsune, S., Saito, S., 2014, Electronic structures of hexagonal boron-nitride monolayer: strain-induced effects, *J. Am. Ceram. Soc.* 5, 346-348.
- Griffiths, D. J., 1995, *Introduction to Quantum Mechanics*, Prentice Hall, Inc., Amerika.
- Hohenberg, P., dan Kohn, W., 1964, Inhomogeneous Electron Gas, *Phys. Rev. B* 136.
- Huang, B., dan Lee, H., 2012, Defect and Impurity Properties of Hexagonal Boron Nitride: A First-Principles Calculation, *Phys. Rev. B* 86:245406, 1-8.
- Jacobson, N., Farmer, S., Moore, A., Sayir, H., 1999. High-Temperature Oxidation of Boron Nitride: Monolithic Boron Nitride. *J. Am. Ceram. Soc.* 82, 393-398.
- Jin, C., Lin, F., Suenaga, K., Iijima, S., 2009, Fabrication of Freestanding Boron Nitride Single Layer and Its Defect Assignments, *Phys. Rev. Lett* 102:195505, 1-4.
- Kim, D.-H., Kim, H.-S., Song, M. W., Lee, L. S., Lee, S. Y, 2017, Geometric and Electronic Structure of Monolayer Hexagonal Boron Nitride with Multi-vacancy, *Nano Convergence* 4:13, 1-8.
- Kittel, C., 2005, *Introduction to Solid State Physics*, John Wiley and Sons, Inc., Amerika.
- Kohanoff, J., 2006, *Electronic Structure Calculation for Solids and Molecules: Theory and Computational Methods*, Cambridge University Press, United Kingdom, hal. 85.
- Kohn, W dan Sham, L.J., 1965, Self-Consistent Equations Including Exchange and Correlations Effects, *Phys. Rev.* 140.
- Liu, Z., Gong, Y., Zhou, W., Ma, L., Yu, J., Idrobo, J.C., Jung, J., MacDonald, A.H., Vajtai, R., Lou, J., Ajayan, P., M., 2013, Temperature Oxidation-Resistant Coatings of Hexagonal Boron Nitride, *Nat. Commun.* 4:2541, 1-8.

- Majety, S., Li, J., Zhao, W. P., Huang, B., Wei, S. H., Lin, J.Y., Jiang, H. X., 2013, Hexagonal Boron Nitride and 6H-SiC Heterostructures, *Appl. Phys. Lett.* 102, 1-5.
- Nagashima, A., Tejima, N., Gamou, Y., Kawai, T., Oshima, C., 1996, Electronic States of Monolayer Hexagonal Boron Nitride Formed on the Metal Surfaces, *Surf.Sci* 357-358, 307-311.
- Nahid, S. M., Bhuiyan, F. H., Rakib, T., Mojumder, S., 2017, Effects of Defects on the Fracture Strength of Hexagonal Boron Nitride, *Conference Paper of International Conference on Mechanical, Industrial and Materials Engineering*.
- Novoselov, K.S., Geim, A.K., Morozov, S.V., Jiang, D., Zhang, Y., Dubonos, S.V., Grigorieva, I. V., Firsov, A., A., 2004, Electric field effect in atomically thin carbon films, *Science* 306, 666-669.
- Paine, R., Narula, C., 1990, Synthetic Routes to Boron Nitride, *Chem. Rev.* 90, 73-91.
- Pouch, J.J., Alterovitz, A., Zurich, 1990, Synthesis and Properties of Boron Nitride, *Trans-Tech Publications* 54.
- Robert L. Carter, 1998, *Molecular Symmetry and Group Theory*, John Willey and Sons, Amerika Serikat.
- Ryou, J., Park, J., Hong, S., 2017, Investigations of Vacancy Structures Related to Their Growth in h-BN Sheet, *Nanoscale Res. Lett.* 12, 445.
- Saito, M., Yamashita, K., dan Oda, T., 2007, Magic Numbers of Graphene Multivacancies, *Jpn. J. Appl. Phys* 46, 1185-1187.
- Sholihun, 2015, First-Principles Calculations of Vacancies in Semiconductors, *thesis* University of Kanazawa, Japan.
- Si, M. S., dan Xue, D. S., 2007, Magnetic Properties of Vacancies in a Graphitic Boron Nitride Sheet by First-Principles Pseudopotential Calculations, *Phys. Rev. B* 7:193409, 1-4.

- Staab, T. E. M., Haugk, M., Sieck, A., Frauenheim, Th., Leipner, H. S., 1999, Magic Number Vacancy Aggregates in Si and GaAs – structure and positron lifetime studies, *Physica B* 273-274, 501-504.
- Urasaki, Syu dan Kageshima, H., 2006, Theoretical study of multiatomic vacancies in single-layer hexagonal boron nitride , *Jpn. J. Appl. Phys* 56, 025201, 1-6.
- Wang, H., Taychatanapat, T., Hsu, A., Watanabe, K., Taniguchi, T., Jarillo-herrero, P., Palacios, T., 2011, BN/graphene/BN transistors for RF applications, *IEEE Electron Device Letters* 32(9), 1209 - 1211.
- Wang, J., Ma, F., Liang, W., Sun, M., 2017, Electrical properties and applications of graphene, hexagonal boron nitride (h-BN), and graphene/h-BN heterostructures, *Mater. Today* 2, 6-34.
- Wang, M., Liu, L., Liu, C.-C., Yao, Y., 2016, L. Liu, C. -C. Liu, Y. Yao, 2016, Heterostructures of Germanene, Stanene, and Silicene with Hexagonal Boron Nitride and Their Topological Domain Walls, *Physical Review B* 93, 1-8.
- Yin, L. C., Cheng, H.-M., Saito, R., 2010, Triangle defect states of hexagonal boron nitride atomic layer: Density functional theory calculations, *Phys. Rev. B* 81, 153407.
- Zhu, J., Ha, E., Zhao, G., Zhou, Y., Huang, D., Yue, G., Sun, N., Wang, Y., Lee, S., Xu, C., Wong, K. Y., Zhao, P., Hu, L., Astruc, D., 2017, Recent Advance in MXenes: A Promising 2D Material for Catalysis, Sensor and Chemical Adsorption, *Coord. Chem. Rev.* 352, 306-327.
- Zobelli, A., Ewels, C. P., Gloter, A., Seifert, G., 2007, Vacancy Migration in Hexagonal Boron Nitride, *Phys. Rev. B* 75:094104, 1-7.