

DAFTAR PUSTAKA

- Andiwijayakusuma, D., Ahmad, S., dan Setiadipura, T. (2016): DFT Study of Cs defect in SiC layer TRISO particle, *Proceding of 2nd Nuclear Energy Technology Seminar*: 2355-7524.
- Baumier, B., Kruger, P., dan Pollmann, J. (2008): First-principles investigation of the atomic and electronic structure of the 4 H-SiC (1102)-C (2×2) surface, *Physical Review B-Condensed Matter and Materials Physics*, 78.
- Birch, F. (1947): Finite Elastic Strain of Cubic Crystals, *Physical Review*, 71, 809-824.
- Burke, K., dan Wagner, L. O. (2013): DFT in a nutshell, *International Journal of Quantum Chemistry*. 113, 96-101.
- Burke, K., 2007. The abc of dft. *Department of Chemistry, University of California*.
- Chen N., Peng Q., Jiao Z., Gao F., Van Rooyen I., dan Skerjanc W.F. (2018). Ab initio study of the stability of intrinsic and extrinsic Ag point defects in 3C-SiC. *Journal of Nuclear Materials*. 510, 596-602.
- Colarusso, P., Guo, B., Zhang, K. Q., Bernath, P. F., 1996, *High-Resolution Infrared Emission Spectrum of Strontium Monofluoride*, *Journal of Molecular Spectroscopy*. 175, 158-171.
- Fan, Q., Chai, C., Wei, Q., dan Yang, Y. (2016). The Mechanical and Electronic Properties of Carbon-Rich Silicon Carbide. *Materials*. 9, 333.
- Feng, Z. C. (2004): *SiC power materials, devices and applications*, Berlin: Springer.
- Fenici, P., dan Scholz, H. (1994). Advanced low-activation materials. Fibre-reinforced ceramic composites. *Journal of Nuclear Materials: Part 1*. 212, 60-68.
- Freysoldt, C., Grabowski, B., Hickel, T., Neugebauer, J., Kresse, G., Janotti, A., dan Van De Walle, C. G. (2014): First-principles calculations for point defects in solids, *Reviews of Modern Physics*, 86, 253-305.

- Foresman, J. B. (2016). *Exploring chemistry with electronic structure methods*. Foresman, Foresman. Pittsburgh, PA, Gaussian.
- Gao, F., Bylaska, E. J., Weber, W. J., dan Corrales, L. R. (2001). Native defect properties in b-SiC: Ab initio and empirical potential calculations. *Nuclear Instruments dan Methods in Physics Research. Section B, Beam Interactions with Materials and Atoms*. 180, 286.
- Geoffrey Rothwell, J.R. (1997): On the Optimal Lifetime of Nuclear Power Plants, *Journal of Business and Economic Statistic*, 15, p. 195-208.
- Griffiths, D. J. (1994): *Introdution to Quantum Mechanics*: Englewood Cliffs, NJ Prentice-Hall.
- Gregory K., John T., Darrel L., dan Knudson. (2006): An evaluation of the effects of SiC layer thinning on failure of TRISO-coated fuel particles, *Journal of Nuclear Materials*, 355, p. 150-162.
- Hartree, D. R. (1928): The Wave Mechanics of an Atom with a Non-Coulomb Central Field. Part I. Theory and Methods, *Mathematical Proceedings of the Cambridge Philosophical Society*, 24, 89.
- Hasegawa, M., Teraji, T., dan Koizumi, S. (2001): Lattice Location of Phosphorus in n-type Homeopitaxial Diamond Films Grown by Chemical-Vapor Deposition, *Applied Physics Letters*, 79(19), 3068.
- Hohenberg, P., dan Kohn, W. (1964): Inhomogeneous electron gas, *Physical review*, 136(3B), p.B864.
- Idaho National Laboratory, dan United States. (2011). *Modular HTGR Safety Basis and Approach*. Washington, D.C., United States. Office of Nuclear Energy, Science, and Technology. <http://www.osti.gov/servlets/purl/1027940/>.
- Igumbor, E. (2017): *Hybrid functional study of point defects in germanium*. Tesis, Fakultas Ilmu Pengetahuan Alam dan Pertanian, Universitas Pretoria.
- Katoh, Y., Ozawa, K., Shih, C., Nozawa, T., Shinavski, R. J., Hasegawa, A., dan Snead, L. L. (2014). *Continuous SiC fiber, CVI SiC matrix composites for nuclear applications: Properties and irradiation effects*. *Journal of Nuclear Materials*. 448, 448-476.

- Kaviani, B. (2015): *Theoretical Investigation of Luminescent Defects in Diamond*. Universitaatsbibliothek Bremen, diambil dari <https://elib.suub.uni-bremen.de/edocs/00104254-1.pdf>
- Kirk, R. E., Othmer, D. F. (2004): *Encyclopedia of chemical technology*, Vol 3, New York: Wiley.
- Kittel, C. (1966): *Introduction to solid state physics*, New York: Wiley.
- Kohn, W., dan Sham, L. (1965): Self-Consistent Equations Including Exchange and Correlation Effects, *Physical Review*, 140, 33-38.
- Kohn, W. (1999): *Electronic structure of matter-wave functions and density functionals*, Department of Physics, University of California, Santa Barbara, Nobel Lecture.
- Konstantinova, E., Bell, M. J., dan Anjos, V. (2008). Ab initio calculations of some electronic and elastic properties for SiC polytypes. *INTERMETALLICS*. 16, 1040-1042.
- Levenberg, K. (1944): A method for the solution of certain non-linear problems in least squares, *Quarterly of Applied Mathematics*, 2, 164-168.
- Li, C., dan Fang, C. (2017): First-principle studies of radioactive fission productions of Cs/Sr/Ag/I adsorption on silicon carbide in HTGR, *Progress in Nuclear Energy*, 100, 164-170.
- Malherbe, J.B. (2013): Diffusion of fission products and radiation damage in SiC, *Journal of Physics D: Applied Physics*, 46(47), p.473001.
- Masri, P. (2002): Silicon carbide and silicon carbide-based structures: the physics of epitaxy, *Surface Science Reports*, 48(1), pp.1-51.
- Martin, R.M. (2004): *Electronic Structure Basic Theory and Practical Methods*, Cambridge University Press, Cambridge, UK, 2004, 1st ed, p. 53, 119, 152.
- Nakano, H., Watari, K., Kinemuchi, Y., Ishizaki, K., dan Urabe, K. (2004): Microstructural characterization of high-thermal-conductivity SiC ceramics, *Journal of the European Ceramic Society*, 24(14), pp.3685-3690.

- Parr, R. G., dan Weitao, Y. (2015): *Density-Functional Theory of Atoms and Molecules*, Oxford University, diambil dari <http://public.eblib.com/choice/publicfullrecord.aspxp=4702301>.
- Perdew, J. P., Chevary, J. A., Vosko, S. H., Jackson, K. A., Pederson, M. R., Singh, D. J., dan Fiolhais, C. (1992): Atoms, molecules, solids, and surfaces: Applications of the generalized gradient approximation for exchange and correlation, *Physical Review B*. 46, 6671-6687.
- Pierson, H. O. (2001). *Handbook of refractory carbides and nitrides properties, characteristics, processing, and applications*. Park Ridge, N.J, Noyes Publications. <http://www.knovel.com/knovel2/Toc.jsp?BookID=238>. <http://www.osti.gov/servlets/purl/911071-AeJx5A/>.
- Robert L. Carter, 1998, *Molecular Symmetry and Group Theory*, John Willey and Sons, Amerika Serikat.
- Ruihuan, Li. (2015): *First-principles study of the multiple He trapping in defects in vanadium and SiC*. Sweden: Material vetenskap KTH SE-100 44 Stockholm.
- Sahin, H., Cahangirov, S., Topsakal, M., Bekaroglu, E., Akturk, E., Senger, R. T., dan Ciraci, S. (2009): Monolayer honeycomb structures of group-IV elements and III-V binary compounds: First-principles calculations, *Physical Review B*, 80(15), 155453.
- Sholl, D., Steckel, J. A., dan Sholl. (2011): *Density Functional Theory: A Practical Introduction*, Somerset: Wiley.
- Sholihun, 2015, First-Principles Calculations of Vacancies in Semiconductors, *thesis* University of Kanazawa, Japan.
- Shrader, D., Khalil, S. M., Gerczak, T., Allen, T. R., Heim, A. J., Szlufarska, I., dan Morgan, D. (2011): Ag diffusion in cubic silicon carbide, *Journal of Nuclear Materials*, 408, 257-271.
- Shrader, D., Szlufarska, I. dan Morgan, D. (2012): Cs diffusion in cubic silicon carbide, *Journal of Nuclear Materials*, 421(1), pp.89-96.

- Slater, J.C. (1951): A simplification of the Hartree-Fock method, *Physical Review*, 81(3), p.385.
- Smallman, R.E., Bishop, R.J. (2000): *Metalurgi Fisik Modern dan Rekayasa Material*, Jakarta: Erlangga, diambil dari <https://books.google.co.id/booksid=fwdVw-rst0>
- Sun, D., Li, R., Ding, J., Zhang, P., Wang, Y., dan Zhao, J. (2017): Interaction between helium and intrinsic point defects in 3C-SiC single crystal, *Journal of Applied Physics*, 121(22), p.225111.
- Tablero, C. (2013): Electronic structure of substitutional group-1B impurities in β -Silicon carbide, *Chemical Physics Letters*, 578, 59-65.
- Todd Allen, J.B., Mitch Meyer., dan david Petti. (2010): *Materials Challenges for Nuclear Systems, Materials today*, 13.
- Tu, R., Liu, Q., Li, Y., dan Xiao, W. (2018): First principles calculations for iodine atom diffusion in SiC with point defects, *Computational Materials Science*, 142, 427-436.
- Uppstu, A., 2014. Electronic properties of graphene from tight-binding simulations. *Disertasi*. Department of Applied Physics. Aalto University. Helsinki.
- Van Ginhoven, R. M., Chartier, A., Meis, C., Weber, W. J., dan Rene Corrales, L. (2006). Theoretical study of helium insertion and diffusion in 3C-SiC. *Journal of Nuclear Materials*. 348, 51.
- Van De Walle, C. G., dan Neugebauer, J. (2004). First-principles calculations for defects and impurities: Applications to III-nitrides. *Journal of Applied Physics*. 95, 3851-3879.
- Verfondern, K., Nabielek, H., Kania, M. J., dan Allelein, H.J. (2013): *High-quality Thorium TRISO fuel performance in HTGRS*, Juulich, Forschungszentrum, Zentralbibliothek.
- Was, G. (2016). The diffusion of cesium, strontium, and europium in silicon carbide. *Journal of Nuclear Materials*. 476, p. 155-167.

- Wu, H.C., Peng, Y. C., dan Shen, T.P. (2012): Electronic and optical properties of substitutional and interstitial Si-doped ZnO, *Materials*, 5, 2088-2100.
- Zheng, F., Yang, Y., dan Zhang, P. (2010): Work function of single-wall silicon carbide nanotube, *Applied Physics Letters*, 97(26), p.263105.
- Zinkle, S., Terrani, K., dan Snead, L. (2016). *Motivation for utilizing new high-performance advanced materials in nuclear energy systems*. Current Opinion in Solid State and Materials Science. 20, 401-410
- Zhou, J., Rao, X., Tu, S., Duan, L., dan Chen, X. (2015): Temperature and doping dependence of the optical properties of silicon at terahertz frequencies, *In Advanced Materials and Processes for RF and THz Applications (IMWS-AMP)*, *IEEE MTT-S International Microwave Workshop Series on* (pp. 1-3), IEEE.