



DAFTAR PUSTAKA

- Absor, M. A. U., 2015, Density-functional theory based calculation of spin orbit interaction in ZnO, *Disertasi*, Natural science and Technology, Kanazawa University, Kota Kanazawa.
- Absor, M. A. U., Kotaka, H., Ishii, F., dan Saito, M., 2016, Strain-controlled spin splitting in the conduction band of monolayer WS₂, *Phys. Rev. B*, 94 (11): 1–6.
- Andersen, K., dan Kristia, S. T., 2013., Plasmons in metallic monolayer and bilayer transition metal dichalcogenides, *Phys. Rev. B - Condensed Matter and Materials Physics*, 88 (15): 1–5.
- Avsar, A., Tan, J. Y., Taychatanapat, T., Balakrishnan, J., Koon G. K.W., Yeo Y., Lahiri J., Carvalho A., Rodin A.S., O'Farrel E.C.T., Eda G., Neto A.H.C., dan Ozyilmaz B., 2014, Spin-orbit proximity effect in graphene, *Nat. Commun.*, 5: 1–6.
- Awschalom, David, dan Samarth, N., 2009, Spintronics without magnetism, *Physics*, 2(50).
- Bawden, L., Cooil, S. P., Mazzola, F., Riley, J. M., McIntyre, L. J.C., Sunko, V., Hunvik, K. W.B., Leandersson M., Polley C.M., Balasubramanian T., Kim T.K., Hoesch M., Wells, J.W., Balakrishnan G., Bahramy M.S., dan King P.D.C., 2016, Spin-valley locking in the normal state of a transition-metal dichalcogenide superconductor, *Nat. Commun.*, 7 (May): 1–6.
- Becke, A.D., 2014, Perspective: Fifty years of density-functional theory in chemical physics, *J. Chem. Phys.*, 140 (18).
- Britnell, L., Gorbachev, R. V., Jalil, R., Belle, B. D., Schedin, F., Mishchenko, A., Georgiou, T., Katsnelson, M. I., Eaves, L., Morozov, S. V., Peres, N. M. R., Leist, J., Geim, A. K., Novoselov, K. S., dan Ponomarenko, L. A., 2012, Field-effect tunneling transistor based on vertical graphene heterostructures, *Science*, 335 (6071): 947–50.
- Bussolotti, F., Kawai, H., Ooi, Z. E., Chellappan, V., Thian, D., Pang, A. L. C., dan Goh, K. E. J., 2018, Roadmap on finding chiral valleys: Screening 2d materials for valleytronics, *Nano Futures*, 2 (3).
- Bychkov, Y. A., dan Rashba, E. I., 1984, Properties of a 2D Electron Gas with Lifted Spectral Degeneracy, *JETP Lett.*, 39:78.
- Cheng, C., Sun, J., Chen, X., Fu, H., dan Meng, S., 2016, Nonlinear Rashba Spin Splitting in Transition Metal Dichalcogenide Monolayers, *Nanoscale* 00, 1-3.
- Clarke, R., Marseglia, E., dan Hughes, H. P., 1978, A low-temperature structural phase transition in β -mote2, *Philosophical Magazine B: Physics of Condensed*



Matter; Statistical Mechanics, Electronic, Optical and Magnetic Properties, 38 (2): 121–26.

Crepaldi, A., Autès, G., Sterzi, A., Manzoni, G., Zacchigna, M., Cilento, F., Voborník, I., Fujii, J., Bugnon, P., Magrez, A., Berger, A., Parmigiani, F., Yazyev, O. V., dan Grioni, M., 2017, Persistence of a surface state arc in the topologically trivial phase of MoTe₂, *Phys. Rev. B.*, 95 (4): 1–5.

Dawson, W. G., dan Bullett D. W., 1987, Electronic structure and crystallography of MoTe₂and WTe₂, *J. Phys. C: Solid State Physics*, 20 (36): 6159–74.

Dresselhaust, G. 1955, Spin-Orbit Coupling Effects in Zinc Blende Structures, *Phys.Rev.*, 100 (2).

Du, L., Liao, M., Liu, G. B., Wang, Q., Yang, R., Shi, D., Yao, Y., dan Zhang, G., 2019, Strongly distinct electrical response between circular and valley polarization in bilayer transition metal dichalcogenides, *Phys. Rev. B.*, 99 (19): 1–9.

Giglberger, S., Golub, L. E., Bel'kov, V. V., Danilov, S. N., Schuh, D., Gerl, C., Rohlfing, F., Stahl, J., Wegscheider, W., Weiss, D., Prettl, W., dan Ganichev, S. D., 2007, Rashba and Dresselhaus spin splittings in semiconductor quantum wells measured by spin photocurrents, *Phys. Rev. B.- Condensed Matter and Materials Physics* 75 (3): 1–8.

Gmitra, M., Konschuh, S., Ertler, C., Draxl, C. A., dan Fabian, J., 2009, Band-structure topologies of graphene: Spin-orbit coupling effects from first principles, *Phys.Rev. B., - Condensed Matter and Materials Physics*, 80 (23): 1–5.

Griffiths, D., 2005, *Introduction to Quantum Mechanics Journal of Catalysis*, Edisi kedua, Prentice Hall, London.

Gupta, A., Cao, H., Parekh, K., Rao, K. V., Raju, A. R., dan Waghmare, U. V., 2007, Room temperature ferromagnetism in transition metal (V, Cr, Ti) doped In₂O₃, *J. App. Phys.*, 101 (9): 3–6.

Herman, F., Kuglin, C. D., Cuff K. F., dan Kortum, R. L., 1963, RELATIVISTIC CORRECTIONS TO THE BAND STRUCTURE OF TETRAHEDRALLY BONDED SEMICONDUCTORS, *Phys.Rev. Lett.*, 11 (12): 541–45.

Hitzemann, Robert, dan Denesa Oberbeck. 2008. *Conclusions. Alcohol Research and Health*. Vol. 31.

Hohenberg, P., dan Kohn, W., 1964. Inhomogeneous Electron Gas, *Phys. Rev. B.*, 136 (3B): 391–402.

Huang, Y., Yartsev, A., Guan, S., Zhu, L., Zhao, Q., Yao, Z., He, C., Zhang, L., Bai, J., Luo, J. W., dan Xu, X., 2020, Hidden spin polarization in the



centrosymmetric Mo S₂ crystal revealed via elliptically polarized terahertz emission, *Phys. Rev. B.*, 102 (8): 1–6.

Jiang, C., Liu, F., Cuadra, J., Huang, Z., Li, K., Srivastava, A., Liu, Z., Gao, W. B., dan Rasmita, A., 2017, Zeeman splitting via spin-valley-layer coupling in bilayer MoTe₂, *Nat. Commun.*, 802 (8): 1–6.

Jiang, J., Liu, Z. K., Sun, Y., Yang, H. F., Rajamathi, C. R., Qi, Y. P., Yang, L. X., Chen, C., Peng, H., Hwang, C., Sun, S. Z., Mo, S. K., Vobornik, I., Fujii, J., Parkin, S. S. P., Felser, C., Yan, B. H., dan Chen Y. L., 2017, Signature of type-II Weyl semimetal phase in MoTe₂, *Nat. Commun.*, 8: 1–6.

Keum, D. H., Cho, S., Kim, J. K., Choe, D. H., Sung, H. J., Kan, M., Kang, H., Hwang, J. Y., Kim, S. W., Yang, H., Chang, K. J., dan Lee, Y. H., 2015, Bandgap opening in few-layered monoclinic MoTe₂, *Nat. Phys.*, 11 (6): 482–86.

Kohn, W., dan Sham, L. J., 1965, Self-Consistent Equations Including Exchange and Correlation Effects, *Phys. Rev.*, 140 (4A).

Kormányos, A., Burkard, G., Gmitra, M., Fabian, J., Zólyomi, V., Drummond, N. D., dan Fal'Ko, V., 2015, K.p theory for two-dimensional transition metal dichalcogenide semiconductors, *2D Materials*, 2(4).

Kormányos, A., Zólyomi, V., Drummond, N. D., dan Burkard, G., 2014, Spin-orbit coupling, quantum dots, and qubits in monolayer transition metal dichalcogenides, *Phys. Rev. X.*, 4 (1): 1–16.

Lezama, I. G., Arora, A., Ubaldini, A., Barreteau, C., Giannini, E., Potemski, M., dan Morpurgo, A. F., 2015. Indirect-to-Direct Band Gap Crossover in Few-Layer MoTe₂. *Nano Letters*, 15 (4): 2336–42.

Liu, Q., Zhang, X., Jin, H., Lam, K., Im, J., Freeman, A. J., dan Zunger, A., 2015, Search and design of nonmagnetic centrosymmetric layered crystals with large local spin polarization, *Phys. Rev. B- Condensed Matter and Materials Physics*, 91 (23): 1–11.

Liu, Q., Zhang, X., dan Zunger, A., 2015, Intrinsic circular polarization in centrosymmetric stacks of transition-metal dichalcogenide compounds, *Phys. Rev. Lett.*, 114 (8): 1–5.

Liu, Y., Weiss, N. O., Duan, X., Cheng, H. C., Huang, Y., dan Duan, X., 2016, Van der Waals heterostructures and devices, *Nat. Pdt. Mater.*, 1 (9).

Mak, K. F., Lee, C., Hone, J., Shan, J., dan Heinz, T. F., 2010, Atomically thin MoS₂: A new direct-gap semiconductor, *Phys. Rev. Lett.*, 105 (13): 2–5.

Novoselov, K. S., Jiang, D., Schedin, F., Booth, T. J., Khotkevich, V. V., Morozov, S. V., dan Geim, A. K., 2005, Two-dimensional atomic crystals, *PNAS*, 102 (30): 10451–53.



- Perdew, J. P., Burke, K., dan Ernzerhof, M., 1996, Generalized gradient approximation made simple, *Phys.Rev. Lett.*, 77 (18): 3865–68.
- Radisavljevic, B., Radenovic, A., Brivio, J., Giacometti, V., dan Kis, A., 2011, Single-layer MoS₂ transistors, *Nat. Nanotechnol.*, 6 (3): 147–50.
- Ramasubramaniam, A., Naveh, D., dan Towe, E., 2011. Tunable band gaps in bilayer transition-metal dichalcogenides. *Physical Review B - Condensed Matter and Materials Physics* 84 (20): 1–10.
- Razzoli, E., Jaouen, T., Mottas, M. L., Hildebrand, B., Monney, G., Pisoni, A., Muff, S., Fanciulli, M., Plumb, N. C., Rogalev, V. A., Strocov, V. N., Mesot, J., Shi, M., Dil, J. H., Beck, H., dan Aebi, P., 2017, Selective Probing of Hidden Spin-Polarized States in Inversion-Symmetric Bulk MoS₂, *Phys.Rev. Lett.*, 118 (8): 1–6.
- Riley, J. M., Mazzola, F., Dendzik, M., Michiardi, M., Takayama, T., Bawden, L., Granerød, C., Leandersson, M., Balasubramanian, T., Hoesch, M., Kim, T. K., Takagi, H., Meevasana, W., Hofmann, P., Bahramy, M. S., Wells, J. W., dan King, P. D. C., 2014. Direct observation of spin-polarized bulk bands in an inversion-symmetric semiconductor, *Nat. Phys.*, 10 (11): 835–39.
- Sakano, M., Bahramy, M. S., Tsuji, H., Araya, I., Ikeura, K., Sakai, H., Ishiwata, S., Yaji, K., Kuroda, K., Harasawa, A., Shin, S., dan Ishizaka, K., 2017, Observation of spin-polarized bands and domain-dependent Fermi arcs in polar Weyl semimetal MoTe₂, *Phys. Rev. B.*, 95 (12): 1–6.
- Tu, J., Chen, X. B., Ruan, X. Z., Zhao, Y. F., Xu, H. F., Chen, Z. D., Zhang, X. Q., 2020, Direct observation of hidden spin polarization in 2H-MoTe₂, *Phys. Rev. B.*, 101 (3): 1–7.
- Vajna, S., Simon, E., Szilva, A., Palotas, K., Ujfalussy, B., dan Szunyogh L., 2012, Higher-order contributions to the Rashba-Bychkov effect with application to the Bi/Ag(111) surface alloy, *Phys.Rev. B.- Condensed Matter and Materials Physics* , 85 (7): 1–7.
- Wakamura, T., Reale, F., Palczynski, P., Guéron, S., Mattevi, C., dan Bouchiat, H., 2018, Strong Anisotropic Spin-Orbit Interaction Induced in Graphene by Monolayer WS₂, *Phys.Rev. Lett.*, 120 (10): 1–5.
- Walser, M., 2013, Spin-orbit interaction and the persistent spin helix in two-dimensional electron gases, *PhD Thesis*, no. 21303: 1–139.
- Wang, Q. H., Zadeh, K. K., Kis, A., Coleman, J. N., dan Strano, M. S., 2012, Electronics and optoelectronics of two-dimensional transition metal dichalcogenides, *Nat. Nanotechnol.*, 7 (11): 699–712.
- Wang, Y., Xiao, J., Zhu, H., Li, Y., Alsaid, Y., Fong, K. Y., Zhou, Y., Wang, S., Shi, W., Wang, Y., Zettl, A., Reed, E. J., dan Zhang, X., 2017, Structural phase



transition in monolayer MoTe₂ driven by electrostatic doping, *Nature* , 550 (7677): 487–91.

Wang, Z., Ki, D. K., Khoo, J. Y., Mauro, D., Berger, H., Levitov, L. S., dan Morpurgo, A. F., 2016, Origin and magnitude of ‘designer’ spin-orbit interaction in graphene on semiconducting transition metal dichalcogenides, *Phys. Rev. X.*, 6 (4): 1–15.

Weber, A. P., Rüßmann, P., Xu, N., Muff, S., Fanciulli, M., Magrez, A., Bugnon, P., Berger, H., Plumb, N. C., Shi, M., Blugel, S., Mavropoulos, P., dan Dil, J. H., 2018, Spin-Resolved Electronic Response to the Phase Transition in MoTe₂, *Phys. Rev. Lett.*, 121 (15): 156401.

Yuan, H., Bahramy, M. S., Morimoto, K., Wu, S., Nomura, K., Yang, B. J., Shimotani, H., Suzuki, R., Toh, M., Kloc, C., Xu, X., Arita, R., Nagaosa, N., dan Iwasa, Y., 2013, Zeeman-type spin splitting controlled by an electric field, *Nature Physics*, 9 (9): 563–69.

Yuan, H., Liu, Z., Xu, G., Zhou, B., Wu, S., Dumcenco, D., Yan, K., Zhang, Y., Mo, S. K., Dudin, P., Kandyba, V., Yablonskikh, M., Barinov, A., Shen, Z., Zhang, S., Huang, Y., Xu, X., Hussain, Z., Hwang, H. Y., Cui, Y., dan Chen, Y., 2016, Evolution of the Valley Position in Bulk Transition-Metal Chalcogenides and Their Monolayer Limit, *Nano Letters*, 16 (8): 4738–45.

Yuan, L., Liu, Q., Zhang, X., Luo, J. W., Li, S. S., dan Zunger, A., 2019, Uncovering and tailoring hidden Rashba spin-orbit splitting in centrosymmetric crystals, *Nature Communications*, 10 (1).

Zelewski, S. J., dan Kudrawiec, R., 2017, Photoacoustic and modulated reflectance studies of indirect and direct band gap in van der Waals crystals, *Scientific Reports*, 7 (1): 1–11.

Zhang, X., Liu, Q., Luo, J. W., Freeman, A. J., dan Zunger, A., 2014, Hidden spin polarization in inversion-symmetric bulk crystals, *Nature Physics*, 10 (5): 387–93.