

## DAFTAR PUSTAKA

- Alfarisa, S., Dwandaru, W.S.B. dan Darmawan, D., 2015, Density Profiles, Energy, and Oscillation Strength of a Quantum Dot in Two Dimensions with a Harmonic Oscillator External Potential using an Orbital-free Energy Functional Based on Thomas-Fermi Theory, *Makara Journal of Science*, 20, 1, 28-32.
- Benguria, R., Brezis, H., dan Lieb, E.H., 1981, Thomas-Fermi-von Weizsäcker Theory of Atoms and Molecules, *Communications in Mathematical Physics*, 79, 167-180.
- Benguria, R. dan Lieb, E.H., 1985, The Most Negative Ion in The Thomas-Fermi-von Weizsäcker Theory of Atoms and Molecules, *J. Phys. B: At. Mol. Phys.*, 18, 1045-1059.
- Benguria, R.D. dan Yarur, C., 1990, Symmetry Properties of The Solutions to Thomas-Fermi-von Weizsäcker Type Equations, *Transactions of The American Mathematical Society*, 320, 2, 665-675.
- Blanchard, P., dan Brüning, E., 1992, *Variational Methods in Mathematical Physics*, Springer, New York.
- Blake, A.J., Clegg, W., Cole, J.M., Evans, J.S.O., Main, P., Parsons, S., dan Watkin, D.J., 2009, *Crystal Structure Analysis: Principles and Practice*, second edition, Oxford Science Publications, New York.
- Buzbee, B.L., Golub, G.H., dan Nielson, C.W., 1970, On Direct Methods for Solving Poisson Equations, *SLAC-PUB-742*, 1-60.
- Cancès, E. dan Ehrlacher, V., 2011, Local Defects are Always Neutral in The Thomas-Fermi-von Weizsäcker Theory of Crystals, *Archive for Rational Mechanics and Analysis*, 202, 933-973.
- Cancès, E. dan Le Bris, C., 2013, Mathematical Modeling of Point Defects in Material Science, *Mathematical Models and Methods in Applied Sciences*, 23, 10, 1-64.
- Catto, I., Le Bris, C., dan Lions, P.L., 1998, *Mathematical Theory of Thermodynamic Limits: Thomas-Fermi Type Models*, Oxford University Press, New York.

- Chan, G.K., Cohen, A.J., dan Handy, N.C., 2001, Thomas-Fermi-Dirac-von Weizsäcker Models in Finite Systems, *The Journal of Chemical Physics*, 114, 631-638.
- Chen, S., Lin, L. dan Xiao, L., 2015, Existence Results for the Periodic Thomas-Fermi-Dirac-von Weizsäcker Equations, *Advances in Mathematical Physics*, 2015, 1-9.
- Crandall, R.E. dan Delord, J.F., 1987, The Potential within a Crystal Lattice, *J. Phys. A: Math. Gen.*, 20, 2279-2292.
- Dacorogna, B., 2004, *Introduction to the Calculus of Variations*, Imperial College Press, London.
- Dacorogna, B., 2008, *Direct Methods in the Calculus of Variations: Second Edition*, Springer, New York.
- Dwandaru, W.S.B., 2010, Various Correspondences Between Simple Driven and Equilibrium Statistical Hard Core Models, *Ph. D. Thesis*, University of Bristol, England.
- Dwandaru, W.S.B. dan Schmidt, M., 2011, Variational Principle of Classical Density Functional Theory via Levy's Constrained Search Method, *Physical Review E*, 83, 061133.
- Ebbing, V., 2010, Design of Polyconvex Energy Functions for All Anisotropy Classes, *Ph. D. Thesis*, Universität Duisburg-Essen, Germany.
- Eisenbud, D., Huneke, C., dan Vasconcelos, W., 1992, Direct Methods for Primary Decomposition, *Inventiones Mathematicae*, 110, 207-235.
- Engel, E. dan Dreizler, R.M., 1989, Extension of The Thomas-Fermi-Dirac-von Weizsäcker Model: Fourth-order Gradient Corrections to The Kinetic Energy, *J. Phys. B: At. Mol. Opt. Phys.* 22, 1901-1912.
- Engel, E. dan Dreizler, R.M., 2011, *Density Functional Theory: An Advanced Course*, Springer, New York.
- Eschrig, H., 1996, *The Fundamentals of Density Functional Theory*, B.G. Teubner Verlagsgesellschaft Leipzig, Germany.

- Fiolhais, C., Nogueira, F., dan Marques, M., 2003, *A Primer in Density Functional Theory*, Springer, New York.
- Fonseca, I. dan Leoni, G., 2007, *Modern Methods in the Calculus of Variations:  $L^p$  Spaces*, Springer, New York.
- Giusti, E., 2005, *Direct Methods in the Calculus of Variations*, World Scientific Publishing Co. Pte. Ltd., Singapore.
- Helle, M., 2006, Few-Electron Quantum Dot Molecules, *Ph. D. Thesis*, Helsinki University of Technology, Finland.
- Hohenberg, P. dan Kohn, W., 1964, Inhomogeneous Electron Gas, *Physical Reviews* 136, 3B, 864-871.
- Jost, J. dan Li-Jost, X., 1998, *Calculus of Variations*, Cambridge University Press, Australia.
- Kohn, W. dan Sham, L.J., 1965, Self-Consistent Equations Including Exchange and Correlation Effects, *Physical Reviews*, 140, 4A, 1133-1138.
- Komlos, R.J. dan Rabinovitch, A., 2008, Thomas-Fermi Model for Quasi One-Dimensional Finite Crystals, *Physics Letter A*, 372, 6670-6676.
- Kouwenhoven, L.P., Austing, D.G., dan Tarucha, S., 2001, Few-electrons Quantum Dot, *Report on Progress in Physics*, 64, 701-736.
- Lieb, E.H. dan Simon, B., 1977, The Thomas-Fermi Theory of Atoms, Molecules and Solids, *Advances in Mathematics*, 23, 22-116.
- Lieb, E.H., 1981, Thomas-Fermi and Related Theories of Atoms and Molecules, *Reviews of Modern Physics*, 53, 4, 603-640.
- Lieb, E.H., 2001, A Brief Review of Thomas-Fermi Theory, *Volume of Paper, in: Honor of L. Spruch, NYU, 2001*- [physics.nyu.edu](http://physics.nyu.edu).
- Lu, J. dan Otto, F., 2014, Nonexistence of Minimizers for Thomas-Fermi-Dirac-von Weizsäcker Model, *Communications on Pure and Applied Mathematics*, 67, 1605-1617.

- Lu, J., Moroz, V., dan Muratov, C.B., 2015, Orbital-Free Density Functional Theory of Out-of-Plane Charge Screening in Graphene, *Journal of Nonlinear Science*, 25, 1391-1430.
- Morgan III, J.D., 1996, Thomas-Fermi and Other Density-Functional Theories, *Atomic, Molecular, & Optical Physics Handbook*, AIP Press, New York.
- Nam, P.T. dan Bosch, H.V.D., 2016, Nonexistence in Thomas-Fermi-Dirac-von Weizsäcker Theory with Small Nuclear Charge, arXiv: 1603.07368v1.
- Parr, R.G. dan Yang, W., 1989, *Density-Functional Theory of Atoms and Molecules*, Oxford University Press, New York.
- Pittalis, S. dan Räsänen, E., 2009, Orbital-free energy functional for electrons in two dimensions, *Physical Review B*, 80, 165112.
- Prince, E., 2004, *International Tables for Crystallography, Vol. C: Mathematical, Physical, and Chemical Tables*, 3rd edition, Dordrecht, Springer Science and Business Media, ISBN-10: 1402019009.
- Räsänen, E., Bekçioğlu, G., dan Pittalis, S., 2011, Fast approximation for the energy and density of electrons in two dimensions, arXiv: 1111.6470v1
- Szwacki, N.G. dan Szwacka, T., 2010, *Basic Elements of Crystallography*, 1st edition, Pan Stanford Publishing, Singapore, ISBN-10: 9814241598.
- Wahyuni, S., Dwandaru, W.S.B., dan Rosyid, M.F., 2014a, Metode Langsung dalam Teori Thomas-Fermi, *Prosiding Mathematics and Sciences Forum 2014*, ISBN 978-602-0960-00-5, 53-56.
- Wahyuni, S., Dwandaru, W.S.B., dan Rosyid, M.F., 2014b, On The Minimizer of Thomas-Fermi-Dirac-von Weizsäcker Model, *Journal of Physics: Conference Series*, 539, 012015, 1-5.
- Wahyuni, S., Dwandaru, W.S.B., dan Rosyid, M.F., 2016a, Estimation of The Minimizer of The Thomas-Fermi-Dirac-von Weizsäcker Functional of NaCl Crystal Lattice, *Journal of Physics: Conference Series*, 739, 012116, 1-7.
- Wahyuni, S., 2016, Profil Densitas Model Thomas-Fermi-Dirac-von Weizsäcker, *Jurnal Sains dan Teknologi*, 14, 1, 1-7.

- Wahyuni, S., Khasani, A., Dwandaru, W.S.B., dan Rosyid, M.F., 2016b, The Umbrella Function Describing the Density of External Electrons Injected in NaCl Crystal, *American Journal of Applied Sciences*, 13, 12, 1347-1353.
- Waseda, Y., Matsubara, E., dan Shinoda, K., 2011, *X-Ray Diffraction Crystallography: Introduction, Examples, and Solved Problems*, 1st edition, Springer Science and Business Media, Berlin, ISBN-10: 3642166350.
- Weinan, E. dan Lu, J., 2012, Stability and Continuum Limit of The Spin-polarized Thomas-Fermi-Dirac-von Weizsäcker Model, *Journal of Mathematical Physics*, 53, 115615, 1-21.
- Zaremba, E., 1996, Magnetoplasma Excitations in Electron Rings, *Physical Review B*, 53, 16, R10 512-515.
- Zhuravlev, Yu. N., Basalev, Yu. N., dan Poplavnoi, A.S., 2001, Electron Density Calculations for Crystals with a NaCl Lattice, *Journal of Structural Chemistry*, 42, 2, 172-176.