



DAFTAR PUSTAKA

- Aburaya, Y., Na, Y.H., Orihara, H., dan Hiraoka, K., 2012, Electric-field-induced deformation of a chiral liquid-crystal elastomer in smectic A phase. *Korea-Australia Rheology Journal*, 2, 24, 83-88.
- Adam, J.M., 2005, Statistical Models Of Elasticity In Main Chain And Smectic Liquid Crystal Elastomers, *Disertasi*, Fitzwilliam College University of Cambridge, Cambridge.
- Adam, J.M. dan Warner, M., 2007, Mechanical response of Smectic C elastomers. *Electronic-Liquid Crystal Communications*, 1-10, http://www.e-lc.org/docs/2007_09_30_06_40_42.
- Akita, T., Uchida, Y., Nakagami, S., Kiyohara, D., dan Nishiyama, N., 2015, Ferromagnetic Based on Paramagnetic Nitroxide Radical Liquid Crystal, *Crystals*, 5, 206-214.
- Andrienko, D., 2006, *Lecture Notes : Introduction To Liquid Crystals*, International Max Planck Research School, Bad Marienberg.
- Aramaki, J., 2013, Magnetic field-induced stability of a specific configuration and the asymptotic behavior of minimizers in nematic liquid crystals, *Turkish Journal of Mathematics*, 13, 1001-1021.
- Baus, M. dan Tejero, C.F., 2008, *Equilibrium Statistical Physics, Phases of Matter and Phase Transitions*, Springer, Brussel.
- Benenson, W., Harris, J.W., Stocker, H. dan Lutz, H., 2002, *Handbook of Physics*, Springer-Verlag, Inc., New York.
- Benicewicz, B.C., Smith, M.E., Earls, J.D., Priester, Jr., R.D., Setz, S.M., Duran, R.S., Douglas, E.P., 1998, Magnetic Field Orientation of Liquid Crystalline Epoxy Thermosets, *Macromolecules*, 31, 4730-4738.
- Berlic, C., Moisesescu, M., dan Barna, V., 2012, The Effect of the Electric Field on the Nematic Liquid Crystal Molecular Redistribution in the Vicinity of an Immersed Spherocylindrical Nanoparticle, *Digest Journal of Nanomaterials and Biostructures*, 4, 7, 1401-1412.
- Binder, K., 2001, *Statistical Theories of Phase Transitions*, Kostorz, G., *Phase Transformations in Materials*, Wiley-VCH Verlag GmbH, Weinheim.



- Boamfa, M.I., Lazarenko, S.V., Kirilyuk, A., Rasing, T., 2005, Magnetic Field Alignment of Liquid Crystals for Fast Display Applications. *Advanced Materials*, 5, 17, 610-614.
- Chandrasekhar, S., 1992, *Liquid Crystals*, 2nd Edition, Cambridge University Press, Cambridge.
- Ching, W-K. dan Ng, M. K., 2006, *Markov Chain: Model, Algorithms and Applications*, Springer Science+Business Media, Inc., New York.
- Chiu, H-W dan Kyu, T., 1995, Equilibrium Phase Behavior of Nematic Mixtures. *Chemical Physics*, 103, 17, 7471-7481.
- Chiu, H-W, Zhou, Z.L., Kyu, T., Cada, L.G., dan Chien, L.-C., 1996, Phase Diagram and Phase Separation Dynamics in Mixtures of Side-Chain Liquid Crystalline Polymers and Low Molar Mass Liquid Crystals. *Macromolecules*, 29, 1051-1058.
- Corbett, D. dan Warner, M., 2008, Polarization dependence of optically-driven elastomer mechanics, *Electronic-Liquid Crystal Communications*, 1-14, http://www.e-lc.org/docs/2008_09_24_10_07_43.
- Duan, F. dan Guojun, J., 2005, *Introduction to Condensed Matter Physics*, Vol. 1, World Scientific Publishing Co. Pte. Ltd., Singapura.
- de Gennes, P. G. dan Prost, J., 1993, *The Physics of Liquid Crystals*, Clarendon Press, Oxford.
- de Jeu, W.H., 2012, *Liquid Crystal Elastomers : Materials and Applications*, Springer-Verlag, Heidelberg.
- Demus, D., Goodby, J., Gray, G.W., Spiess, H.-W. dan Vill, V., 1998, *Handbook of Liquid Crystals, Vol.1: Fundamentals*, Wiley-VCH, Hoboken.
- Dey, S., Kooijman, D.M.A, Ren, W., McMullan, P.J., Griffin, A.C., dan Kumar, S., 2013, Soft Elasticity in Main Chain Liquid Crystal Elastomers, *Crystals*, 3, 363-390.
- Dimov, I.T., 2008, *Monte Carlo Methods for Applied Scientists*, World Scientific Publishing Co. Pte. Ltd., New Jersey.
- Dresselhaus, M.S., Dresselhaus, G. dan Jorio, A., 2008, *Group Theory, Application to the Physics of Condensed Matter*, Springer-Verlag, Berlin.



- Ercollesi, F., 1997, *A Molecular Dynamics Primer*, International School for Advanced Studies, Trieste.
- Ferduzco, R., 2007, *Self-Assembled Liquid Crystal Polymer Gels*, California Institute of Technology, Pasadena.
- Frenkel, D., 2004, *Introduction to Monte Carlo Methods*, John von Neumann Institute for Computing, Julich.
- Fishman, G.S., 1996, *Monte Carlo : Concepts, Algorithms, and Applications*, Springer-Verlag, New York.
- Gaikwad, P.P. dan Desai, M.T., 2013, Liquid Crystalline Phase and Its Pharma Applications, *International Journal of Pharma Research & Review*, 2, 12, 40-52.
- Gedde, U.W., 1995, *Polymer Physics*. Chapman & Hall, London.
- Ghoshal, N., Mukhopadhyay, K., dan Roy, S.K., 2014, Effect of an external magnetic field on the nematic-isotropic phase transition in mesogenic systems of uniaxial and biaxial molecules: A Monte Carlo study, *Phys. Rev. E* 89, 042505.
- Giordano, N. J., 1997, *Computational Physics*, Prentice-Hall, Inc., Upper Saddle River.
- Goodby, J.W., 2007, *Liquid Crystal Phase Transitions, Differential Scanning Calorimetry and Optical Microscopy*, The York Liquid Crystal Group, New York.
- Grimmet, G.R. dan Stirzaker, D.R., 2001, *Probability and Random Processes*, Oxford University Press Inc., New York.
- Ikeda, T., Mamiya, J-I, Yu, Y., 2007, Photomechanics of Liquid-Crystalline Elastomers and Other Polymers. *Angew. Chem. Int. Ed.*, 46, 506 – 528.
- Jayasri, D., Sastry, V.S.S., dan Murthy, K.P.N., 2008, Effect of cross-link density on the nematic–isotropic phase transition in liquid crystal elastomers, *Computational Materials Science*, 1, 44, 185-189.
- Jayasri, D., 2009, Non Boltzmann Monte Carlo Study of Confined Liquid Crystals and Liquid Crystals Elastomers, *Disertasi*, School of Physics University of Hyderabad, Hyderabad.
- Jensen, M.H., 2005, *Lecture Notes Fall 2005: Computational Physics*, University Of Oslo, Oslo.



- Jensen, M.H.-, 2014, *Lecture Notes Fall 2014: Computational Physics*, University of Oslo, Oslo.
- Kalos, M.H. dan Whitlock, P.A., 2004, *Monte Carlo Methods*, Wiley-VHC Verlag GmbH & Co., New York
- Kao, E.P.C., 1997, *An Introduction Stochastic Processes*, Wadsworth Publishing Company, Houston.
- Khoo, I-C., 2007, *Liquid Crystals, 2nd Edition*, John Wiley & Sons, Hoboken.
- Kendal, W.S., Liang, F. dan Wang, J.S., 2005, *Markov Chain Monte Carlo, Innovations and Application*, World Scientific Publishing, Singapore.
- Kim, J.Y. dan Kim, S.O., 2014, Electric fields line up graphene oxide, *Nature Materials*, 13, 325-326.
- Koonin, S.E., 1986, *Computational Physics*, Addison-Wesley Pub. Comp, Inc., Redwood.
- Koonin, S.E. dan Meredith, D.C., 1990, *Computational Physics, Fortran Version*. Addison-Wesley Publishing Company, New York.
- Kopcansky, P., Tomasovicova, N., Katona, T.T., Eber, N., Timko, M., Zavisova, V., Majorosova, J., Rajnak, M., Jadzyn, J., dan Chaud, X., 2013, Increasing The Magnetic Sensitivity of Liquid Crystals by Rod-Like Magnetic Nanoparticles, *Magnetohydrodynamics*, 3-4, 49, 586-591.
- Kroese, D.P., Taimre, T. dan Botev, Z.I., 2011, *Handbook of Monte Carlo Methods*, John Wiley & Sons, Inc., Pub., Hoboken.
- Landau, D. dan Binder, K., 2009, *A Guide to Monte Carlo Simulation in Statistical Physics 3rd edition*, Cambridge University Press, Cambridge.
- Lavric, M., 2011, Liquid Crystal Elastomers, *Disertasi*, Faculty of Mathematics and Physics University of Ljubljana, Ljubljana.
- Longman, R.W., 2003, On the Interaction between Theory, Experiments, And Simulation In Developing Practical Learning Control Algorithms, *Int. J. Appl. Math. Comput. Sci.*, 1, 13, 101–111.
- Mark, J.E., 2007, *Physical Properties of Polymers Handbook*, Springer Science + Business Media, LLC., New York.



- Mark, S., dan Mordechai, S., 2011, *Applications of Monte Carlo Method in Science and Engineering*, InTech, Rijeka-Croatia.
- Martinez, W.L. dan Martinez, A.R., 2002, *Computational Statistics, Handbook with MATLAB*, Chapman & Hall/CRC, Boca Raton.
- Matsuyama, A. dan Kato, T., 2001, Volume Phase Transition of Nematic Gels under An External Field, *Journal of Chemical Physics*, 8, 114, 3817-3822.
- Matsuyama, A. 2002. Nematic Ordering in Mixtures of Polymers and Liquid Crystals, *Res. Rep. Fac. Eng. Mie Univ.*, Vol. 27, 9-22.
- Matsuyama, A. dan Ueda, T., 2012, Phase diagrams of binary mixtures of liquid crystals and rodlike polymers in the presence of an external field. *Journal of Chemical Physics*, 136, (224904-1)- (224904-8).
- Moreira, M.F., Luchette, P., dan Muhoray, P.P., 2010, Nonlinear reflection from liquid crystal elastomers, *Photonics Letters Of Poland*, 3, 2, 101-103.
- Muhoray, P.P., 2007, *Orientationally Ordered Soft Matter : The Diverse World of Liquid Crystals*, Kentucky State University, Kentucky.
- Murthy, K. P. N., 2000, *Monte Carlo : Basics*, Indian Society for Radiation Physics, Kalpakkam.
- Murray, I., 2007, *Advances Markov Chain Monte Carlo Methods*, *Disertasi*, Gatsby Computational Neuroscience Unit, University College London, London.
- Nishimori, H. dan Ortiz, G., 2010, *Elements of Phase Transitions and Critical Phenomena*, Oxford University Press, Oxford.
- Norris, J.R., 1997, *Markov Chains*, Cambridge University Press, Cambridge.
- Ohm, C., Brehmer, M., dan Zentel, R., 2012, Applications of Liquid Crystalline Elastomers, *Advanced Polymer Science*, 250, 49-94.
- O'mray, L.K., 2013, Liquid Crystals as Novel Vesicular Delivery System : A Review, *Current Trends in Technology and Science*, VI, II, 347-353.
- Ostapenko, T., Wiant, D.B., Sprunt, S.N., Jakli, A., Gleeson, J.T., 2008, Magnetic-field induced isotropic to nematic liquid crystal phase transition, *electronic-Liquid Crystal Communications*, 1-12, http://www.e-lc.org/docs/2008_10_15_17_04_24.



- Papon, P., Leblond, J. dan Meijer, P.H.E., 2006, *The Physics of Phase Transitions, Concepts and Applications*, Springer-Verlag, Berlin.
- Pasini, P., Skačej, G. dan Zannoni, C., 2005, A Microscopic Lattice Model for Liquid Crystal Elastomers, *Chemical Physics Letters*, 413, 463-467.
- Pleiner, H., 2007, *Introduction to Liquid Crystalline Elastomers*, Max Planck Institute for Polymer Research, Mainz.
- Press, W.H. Teukolsky, S.A., Vetterling, W.T. dan Flannery, B.P., 2007, *Numerical Recipes, The Art of Scientific Computing*, 3th Ed. Cambridge University Press, Cambridge.
- Rao, C.N.R. dan Rao, K.J., 1978, *Phase Transitions In Solids : An approach to the study of Chemistry and Physics of Solids*, McGraw-Hill Inc., New York.
- Ross, S.M., 2006, *Simulation, 4th Edition*, Elsevier Inc., San Diego.
- Rubinstein, R.Y., 1981, *Simulation and the Monte Carlo Method*, John Wiley and Sons, New York.
- Rubinstein, R.Y. dan Kroese, D.P., 2007, *Simulation and the Monte Carlo Method, 2nd Edition*, John Wiley and Sons, Hoboken.
- Rubinstein, M. dan Colby, R.H., 2003, *Polymer Physics*, Oxford University Press, Oxford.
- Shanbhag, D.N., dan Rao, C.R., 2003, *Stochastic Processes : Modelling and Simulation*, Elsevier Science B.V., Amsterdam.
- Shonkwiler, R.W, dan Mendivil, F., 2009, *Exploration in Monte Carlo Methods*. Springer Science + Business Media, LLC ., Springer.
- Singh, S., 2002, *Liquid Crystals : Fundamentals*, World Scientific Publishing Co. Pte. Ltd., Singapore.
- Singh, S., 2000, Phase transitions in liquid crystals, *Physics Reports*, 324, 107-269.
- Skačej, G. dan Zannoni, C., 2006, External field-induced switching in nematic elastomers : A Monte Carlo Study, *The European Physics Journal E.*, 20, 289-298.



- Skačej, G. dan Zannoni, C., 2008, Biaxial liquid-crystal elastomers: A lattice model, *The European Physical Journal E.*, 25, 181-186.
- Sobol, I.M., 1994, *A Primer for the Monte Carlo Method*, CRC Press, Inc., Boca Raton.
- Sokolowski, J.A. dan Banks, C.M., 2010, *Modeling and Simulation Fundamentals, Theoretical Underpinnings and Practical Domains*. John Wiley and Sons, Inc., Pub., Hoboken.
- Srinivasan, N.K., 2001, Computer Based Modeling and Simulation. *Resonance*, 3, 6, 46-54.
- Sulistya, E., 2012, Simulasi Model Ising 2 Dimensi dengan Algoritma Metropolis pada Lembarkerja Exel, *Prosiding Pertemuan Ilmiah XXVI HFI Jateng & DIY*, Purworejo.
- Syah, H.J., 2007, Engineered Interfaces for Liquid Crystal Technology, *Disertasi*, Drexel University, Philadelphia.
- Tamir, A., 2005, *Applications of Markov Chains in Chemical Engineering*, Elsevier Science, New York
- Teraoka, I., 2002, *Polymer Solutions : An Introduction to Physical Properties*, John Wiley & Sons, Inc., Pub., New York.
- Urayama, K., Okuno, Y., Nakao, T., dan Kohjiya, S., 2003, Volume Transition of Liquid Crystalline Gels in Isotropic Solvents. *Macromolecules*, 36, 6229-6234.
- Urayama, K., Okuno, Y., Nakao, T., dan Kohjiya, S., 2003, Volume Transition of Nematic Gels in Nematogenic Solvents, *Journal of Chemical Physics*, 6, 118, 2903-2910.
- Urayama, K., 2012, *Electro-Opto-Mechanical Effects in Swollen Nematic Elastomers*, de Jeu, W.H., *Liquid Crystal Elastomers : Materials and Applications*, Springer-Verlag, Heidelberg.
- Wang, M., He, L., Zorba, S., dan Yin, Y., 2014. Magnetically Actuated Liquid Crystals, *Nano Letters*, Juni, 3966-3970.
- Wang, X.J., Warner, M., 1985, Theory Of Nematic Backbone Polymer Phases And Conformations, *J. Phys. A: Math. Gen.*, 19, 2215-2227.
- Wang, X-J. dan Zhou, Q-F., 2004, *Liquid Crystalline Polymers*, World Scientific Publishing Co. Pte. Ltd., Singapura.



- Warner, M. dan E.M. Terentjev, E.M., 2007, *Liquid Crystal Elastomers, Revised Edition*, Oxford University Press, Oxford.
- Warsono, Abraha, K., Yusuf, Y., dan Nurwantoro, P., 2010, Study on the Magnetic Field Dependence of the Nematic-Isotropic Phase Transition of Liquid Crystals : A Monte Carlo Study by Employing the Wang-Warner Simple Cubic Lattice Model, *International Journal of Basic and Applied Sciences-International Journals of Engineering and Natural Sciences (IJBAS-IJENS)*, 6, 10, 19-29.
- Warsono, Yusuf, Y., Nuwantoro, P., dan Abraha, K., 2014, Monte Carlo Simulation of The Nematic-Isotropic Phase Transition of Liquid Crystal under Magnetic Field, *International Conference on Physics (ICP2014)*, Yogyakarta , Atlantic Press Pub., 41-46.
- Warsono, Yusuf, Y., Nuwantoro, P., Abraha, K., 2015, The Effect of Magnetic Field on The Phase Transition of Swollen Liquid Crystal Elastomers, *7th International Conference on Physics and Its Applications 2014 (ICOPIA 2014)*, Surakarta, Atlantic Press Pub, 188-194.
- Wilson, M.R., 2007, Molecular Simulation of Liquid Crystals : Progress towards a Better Understanding of Bulk Structure and the Prediction of Material Properties (Tutorial Review), *The Royal Society of Chemistry*, 36, 1881-1888.
- Yang, D.K dan Wu, S.T., 2006, *Fundamentals of Liquid Crystal Devices*, Wiley & Sons Ltd., Chichester.
- Yang, W.Y., Cao, W., Chung, T.-S., dan Morris, J., 2005, *Applied Numerical Methods Using MATLAB*, John Wiley & Sons, Inc., Hoboken.
- Yusuf, Y., Huh, J-H., Cladis, P.E., Brand, H.R., Finkelmann, H., dan Kai, S., 2005, Low-voltage-driven electromechanical effects of swollen liquid-crystal elastomers, *Physical Review E*, 71, (061702-1)- (061702-8).
- Yusuf, Y., 2005, Swelling Dynamics and Electromechanical Effects of Liquid Crystal Elastomers as An Artificial Muscle. *Disertasi*, Kyushu University, Kyushu.
- Zarembo, A., 2005, Computer Simulation Of Liquid Crystal Polymer Systems With Complex Topology, *Disertasi*, Faculty of Science, University of Helsinki, Helsinki.
- Zhu, W., Shelley, M., dan Muhoray, P.P., 2011, Modeling and Simulation of Liquid Crystal-Elastomers, *Physical Review E*, 83, (051703-1) – (051703-11).