

DAFTAR PUSTAKA

- Agostini, M., Cocenza, D.S., Vasconcellos, F.C., Fraceto, L.F., Beppu, M.M., 2013, Chitosan and Alginate Biopolymer Membranes for Remediation of Contaminated Water with Herbicides, *Journal of Environmental Management*, **131** : 222-227
- Albet, Romido, 2012, *Alginat Sebagai Dasar Salep Pelepasan Obat, Penyerapan Air, Aliran Reologi, dan Uji Iritasi Kulit*, Universitas Sumatra Utara, Medan
- Anggarawati, Desi, 2012, *Aktivitas Enzim Selulase Isolat SGS 2609 BBP4B-KP Menggunakan Substrat Limbah Pengolahan Rumput Laut yang Dipretreatment dengan Asam*, Skripsi Mahasiswa Prodi Teknologi Bioproses Fakultas Teknik Universitas Indonesia, Depok
- Bansal, V., Sharma, P.K., Sharma, N., Pal, O.P., Malviya, R., 2011, Applications of Chitosan and Chitosan Derivatives in Drug Delivery, *Biological Research*, **5** : 28-37
- Basmal, J., Utomo, B. S. B., Tazwir, Murdinah, Marraskuranto, E. W. T., Kusumawati, R., 2013, *Membuat Alginat dari Rumput Laut Sargassum*, Penebar Swadaya Grup, Bandung
- Berger, J., Reist, M., Mayer, J.M., Felt, O., Peppas, N.A., Gurny, R., 2004, Structure and Interactions in Covalently and Ionically Crosslinked Chitosan Hydrogels for Biomedical Applications, *European Journal of Pharmaceutics and Biopharmaceutics*, **57** : 19-34
- Billmeyer, F.W., 1984. *Textbook of Polymer Science*. John Wiley & Sons, Inc, New York
- Brandrup, J., Immergut, E.H., 1989, *Polymer Handbook*, 3rd Edition, Willey USA, VII/2
- Buono, G.P., 2013, *Pembuatan dan Karakterisasi Membran Kitosan Hybrid Zeolit A Tersulfonasi untuk Proton Exchange Membrane Fuel Cell (PEMFC)*, Skripsi Mahasiswa S-1 Departemen Kimia FST Universitas Airlangga, Surabaya
- Cruz, M.C.P., Sergio P.R., Fabio, M.S.B., 2004, Evaluation of the Diffusion Coefficient for Controlled Release of Oxytetracycline from Alginate/Chitosan/Poly (Ethylene Glycol) Microbeads in Simulated Gastrointestinal Environments, *Biotechnology, Application Biochemistry*, **40** : 243–253

- Cui, Z., Liu, C., Lu, T., Xing, W., 2007, Polyelectrolyte Complexes of Chitosan and Phosphotungstic Acid as Proton-Conducting Membranes for Direct Methanol Fuel Cell, *Jurnal of Power Sources*, **167** : 94-99
- Davies, A.M.C., Creaser, C.S., 1991, *Analytical Applications of Spectroscopy*, Great Britain by Bookcraft Ltd., 34-38
- Dhuhita, A., Arti, K. D., 2010, *Karakterisasi dan Uji Kinerja SPEEK, cSMM dan Nafion untuk Aplikasi Direct Methanol Fuel Cell (DMFC)*, Skripsi Mahasiswa Teknik Kimia Universitas Diponegoro, Semarang
- Fritz, J.S. and Schenk, G.H., 1987, *Quantitative Analytical Chemistry*, 5th Edition, Prentice Hall, USA
- Handayani, S., Purwanto, W. W., Dewi, E. L., dan Soemanto, R. W., 2007, Sintesis dan Karakterisasi Membran Elektrolit Polieter-eter Keton Tersulfonasi, *Indonesian Journal of Materials Science*, **3** : 129-133
- Handayani, T., Sutarno, Setyawan, D. A., 2004, Analisis Komposisi Nutrisi Rumput Laut *Sargassum crassifolium* J. Agardh, *Biofarmasi*, **2** : 45-52
- Harjanti, S., R., 2014, Kitosan dari Limbah Udang sebagai Bahan Pengawet Ayam Goreng, *Jurnal Rekayasa Proses*, **1** : 12-19
- Hassan, H., Nawawi, M.G.M., 2008, Chitosan as A Membrane Material for Pervaporation Separation Isopropanol-Water Mixtures, *Jurnal Teknologi*, **49** : 207-218
- Husni, A., Subaryono, Pranoto, Y., Tazwir, Ustadi, 2012, Pengembangan Metode Ekstraksi Alginat dari Rumput Laut *Sargassum sp.* sebagai Bahan Pengental, *Agritech*, **32** : 1-8
- Illanes, O. C., Masuelli, A. M., 2014, Review of the Characterization of Sodium Alginate by Intrinsic Viscosity Measurements Comparative Analysis Between Conventional and Single Point Methods, *International Journal of BioMaterials Science and Engineering*, **1** : 1-11
- Jayanudin, Nuryoto, Popy, F., Primadhana, M., 2013, Pemanfaatan Rumput Laut Coklat (*Sargassum sp.*) dari Pulau Panjang-Banten Menjadi Natrium Alginat, *SNIS III*, **3** : 389-394
- Julfana, R., Zaharah, A. T., Idiawati, N., 2010, Hidrolisis Enzimatis Selulosa dari Ampas Sagu Menggunakan Campuran Selulase dari *Trichoderma reesei* dan *Aspergillus niger*, **2** : 52-57
- Kaban, J., Bangun, H., K. Asteria, Daniel, 2006, Pembuatan Membran Kompleks Polielektrolit Alginat Kitosan, *Jurnal Sains Kimia*, **10** : 10-16

- Kloss, W. S., Heil, A., Kaeding, L., Roller, E., 1991, *Thermal Analysis in Environmental Studies*, Springer, Berlin
- Kusumawati, N., 2009, Pemanfaatan Limbah Kulit Udang sebagai Bahan Baku Pembuatan Membran Ultrafiltrasi, *Inotek*, **13** : 1-8
- Kusumawati, N. dan Tania, S., 2012, *Pembuatan dan Uji Kemampuan Membran Kitosan sebagai Membran Ultrafiltrasi untuk Pemisahan Zat Warna Rhodamin B*, Jurusan Kimia FMIPA Universitas Negeri Surabaya, Surabaya
- Knill, C.J., J.F. Kennedy, J. Mistry, M. Miraftab, G. Smart, M.R. Grocock, H.J. William, 2003, Alginate Fibre Modified With Unhydrolysed and Hydrolysed Chitosan for Wound Dressing, *Carbohydrate Polymers*, **55** : 65–76
- Laomongkonmimit, P., Soontrapa, K., 2009, *Chitosan-Zeolite Proton Exchange Membrane*, Fuel Research Center, Department of Chemical Technology, Faculty of Science, Chulalongkorn University
- Liherlinah, Abdullah, M., Khairurrijal, 2009, Sintesis Nanokatalis CuO/ZnO/Al₂O₃ untuk Mengubah Metanol Menjadi Hidrogen untuk Bahan Bakar Kendaraan *Fuel Cell*, *Jurnal Nanosains dan Nanoteknologi*, Edisi Khusus, 90 – 95
- Liu, Y.L., Chen, W.H., Chang, Y.H., 2009, Preparation and Properties of Chitosan/Carbon Nanotube Nanocomposite Using Poly(styrene sulfonic acid)-Modified CNTs, *Carbohydrate Polymers*, **76** : 232-238
- Ma, J., Sahai, Y., 2013, Chitosan Biopolymer for Fuel Cell Applications, *Carbohydrate Polymers*, **92** : 955– 975
- Mulder, M., 1991, *Basic Principles of Membrane Technology*, Kluwer Academic Publishers, London
- Mushollaeni, W., Rusdiana, E., 2011, Karakterisasi Natrium Alginat dari *Sargassum sp.*, *Turbinaria sp.* dan *Padina sp.*, *Jurnal Teknologi dan Industri Pangan*, **22** : 26-32
- Mutia, T., Eriningsih, R., Safitri, R., 2011, Membran Alginat sebagai Pembalut Luka Primer dan Media Penyampaian Obat Topikal untuk Luka yang Terinfeksi, *Jurnal Riset Industri*, **5** : 161-174
- Nayak, L. P., Sahoo, D., Malesu, K. V., 2011, Chitosan-Sodium Alginate Nanocomposites Blended with Cloisite 30B as A Novel Drug Delivery System for Anticancer Drug Curcumin, *International Journal of Applied Biology and Pharmaceutical Technology*, **2** : 402-411

- Onsan, Z.I., Avci, A.K., 2011, *Reactor Design for Fuel Cell Processing, Chapter 14*, Elsevier, 452-465
- Osifo, P. O., Masala, A., 2010, Characterization of Direct Methanol Fuel Cell (DMFC) Applications with H₂SO₄ Modified Chitosan Membrane, *Journal of Power Sources*, **195** : 4915-4922
- Pavia, Donald L., Lampman, Gary M., Kriz, George S., 2001. *Introduction to Spectroscopy*. Department of Chemistry Western Washington University Bellingham, Washington
- Prihatiningsih, M. C., Yohan, Kundari, N. A., 2008, Studi Pendahuluan Preparasi Membran untuk Sel Bahan Bakar Membran Elektrolit Polimer, *Pusat Teknologi Bahan Industri Nuklir* , BATAN, ISSN 1978-0176
- Raharjo, J., Dedikarni, Wan, D., Wan, R., 2007, Perkembangan Teknologi Material pada Sel Bahan Bakar Padat Suhu Operasi Menengah, *Indonesian Journal of Material Science*, **10** : 28-34
- Rasyid, Abdullah, 2009, Perbandingan Kualitas Natrium Alginat Beberapa Jenis Algae Coklat. *Oseanologi dan Limnologi di Indonesia*, **35** : 57-64
- Saim, N., Hassan, H., 2008, Preparation of Pervaporation Membrane Using A-Type Zeolite Filled Chitosan Membrane for the Separation of Isopropanol / Water Mixture, *Jurnal Teknologi Universiti Teknologi Malaysia*, **49** : 197-205
- Sastrohamidjojo, H, 1992, *Spektrofotometri Inframerah*, Liberty, Yogyakarta
- Shiqiang, R. H., Roller, J., Yick, S., Zhang, X., Deces-Petit, C., Xie, Y., Maric, R., Ghosh, D., 2007, A Brief Review of the Ionic Conductivity Enhancement for Selected Oxide Electrolytes, *Journal of Power Sources*, **172** : 493-502
- Sigma-Aldrich, 2002 – 2003, *Biochemicals and Reagents for Life Science Research*
- Smitha, B., Sridhar, S., Khan, A.A., 2005, Chitosan-Sodium Alginate Polyion Complexes As Fuel Cell Membranes, *European Polymer Journal*, **41** : 1859-1866
- Smitha, B., Devi, A.D., Sridhar, S., 2008, Proton-Conducting Composite Membranes of Chitosan and Sulfonated Polysulfone for Fuel Cell Application, *International Journal of Hydrogen Energy*, **33** : 4138-4146
- Sudaryanto, Yulianti E., Dimiyati A., Jodi H., 2012, Pengembangan Elektrolit Padat Berbasis Kitosan untuk Baterai Kendaraan Listrik, *Pusat Teknologi Bahan Industri Nuklir* , BATAN, **84** : 1-10
- Sukandi, A. dan Santoso, B., 2013, Aplikasi Instrumentasi Ultrasonik pada Pengujian Sifat Mekanik Logam, *Politeknologi*, **12** : 1-15

- Viswanathan, S., Nallamuthu, T., 2014, Extraction of Sodium Alginate from Selected Seaweeds and Their Physiochemical and Biochemical Properties, *Engineering and Technology*, **3** : 2319-8753
- Vipin Bansal, Pramod Kumar Sharma, Nitin Sharma, Om Prakash Pal and Rishabha Malviya, 2011, Applications of Chitosan and Chitosan Derivatives in Drug Delivery, *Advances in Biological Research*, **5** : 28-37
- Wan, Ying, A. M. Katherine, Creber, Peppley, B., Tam Bui, V., 2003, Synthesis, Characterization and Ionic Conductive Properties of Phosphorylated Chitosan Membranes, *Macromol Chemistry Physic*, **204** : 850-858
- Wang, J., Zhao, Y., Hou, W., Geng, J., Xiao, L., Wu, Hong, Jiang, Z., 2010, Simultaneously Enhanced Methanol Barrier and Proton Conductive Properties of Phosphorilated Titanate Nanotubes Embedded Nanocomposite Membranes, *Journal of Power Sources*, **195** : 1015-1023
- Wee, Jung-Ho, 2007, Applications of Proton Exchange Membrane Fuel Cell Systems, *Renewable and Sustainable Energy Reviews*, **11** : 1720-1738
- Warsidi, Edi, 2009, *Rumput Laut Rumput Harapan*, Mitra Utama, Bekasi
- Williams, C. Mark, 2011, *Fuel Cells : A Textbook of Technologies for Fuel Cell Processing, Chapter I*, Elsevier, 11-26
- Yohan, Nur, R. M., Hendrajaya, L., Siradj, E. S., 2005, Sintesis Bahan Membran Sel Bahan Bakar Kopolimerisasi Stirena pada Film Etef dengan Teknik Iradiasi Awal, *Teknologi*, **9** : 72-77
- Zywottek, W.W., 2008 – 2010, *Chemicals and Reagens*, Merck KGaA, Darmstadt