

## DAFTAR PUSTAKA

- Arba, Y. and Thamrin, S. (2022) 'Journal Review: Perbandingan Pemodelan Perangkat Lunak Life Cycle Assessment (LCA) untuk Teknologi Energi', *Jurnal Energi Baru dan Terbarukan*, 3(2), pp. 142–153. Available at: <https://doi.org/10.14710/jebt.2022.14001>.
- Aries, R.S. and Newton, R.D. (1955) *Chemical Engineering Cost Estimation*. New York: New York: Mc-Graw Hill.
- Bauman, W.C. (1979) 'United States Patent ( 19 )', (812), pp. 5–12.
- Beach, J.N. *et al.* (1999) *PROCESS/INDUSTRIAL INSTRUMENTS AND CONTROLS HANDBOOK*. 5th edn, *Process/Industrial instruments and controls Handbook*. 5th edn. McGraw-Hill.
- Berne, F. (1995) 'Berne - Industrial Water Treatment'.
- Bintoro, Akhlis & Abidin, M. (2014) 'PENGUKURAN TOTAL ALKALINITAS DI PERAIRAN ESTUARI SUNGAI INDRAGIRI PROVINSI RIAU', (Gambar 1), pp. 11–14.
- Brown, G.G.. (1973) *Unit Operations*. 13th edn. Tokyo: Charles E. Turtle Co.
- Calisaya-azpilcueta, D. (2020) 'Global Lithium Production Till 2025', pp. 36–51. Available at: <https://doi.org/10.2174/1874123102014010036>.
- Cha-umpong, W. *et al.* (2021) 'Concentrating brine for lithium recovery using GO composite pervaporation membranes', *Desalination*, 500(August), p. 114894. Available at: <https://doi.org/10.1016/j.desal.2020.114894>.
- Choubey, P.K. *et al.* (2016) 'Advance review on the exploitation of the prominent energy-storage element: Lithium. Part I: From mineral and brine resources', *Minerals Engineering*, 89, pp. 119–137. Available at: <https://doi.org/10.1016/j.mineng.2016.01.010>.
- Cited, R. and Schofer, P.E.L. (1982) 'United States Patent ( 19 )', (19), pp. 8–11.
- Clara Vasconcelos, Alexandre Lima, José Brilha, Cristina Calheiros, T.R.& A.C. (2019) *Abstract Book : Geoethics ' Syllabus and Geoethics in Georesources and Abstract Book*.
- Crowl, D.A. and Louvar, J.F. (2011) *Chemical Process Safety*. 3rd edn, *Pearson Education Inc*. 3rd edn. Available at: <https://doi.org/10.1115/1.2930019>.
- D.S. Jenkinson, D, E, Adam, A.W. (1981) '© 19 9 1 Nature Publishing Group', *Model Estimates of CO2 Emmisions from soil in response to Global Warming* [Preprint].
- Delila, L., Kindangen, J.I. and Hanny, P. (2016) 'Pusat Penelitian Geothermal Di Tomohon (Architecture Comfort and Energy)', *Jurnal Arsitektur DASENG UNSRAT Manado*, 4, pp. 152–160. Available at: <http://www.novapdf.com>.

Devita (2019) ‘Kebijakan Pemerintah terhadap PT. SAE dalam Pembangunan Listrik Tenaga Panas Bumi (Studi Kasus Sambirata Kabupaten Banyumas)’, *Universitas Muhammadiyah Yogyakarta*, (May), pp. 1–19.

Direktorat Panas Bumi, Direktorat Jenderal EBTKE Pusat Sumber Daya Mineral, Batubara, dan Panas Bumi, B.G. (2017) *POTENSI PANAS BUMI INDONESIA JILID 2 Penyusun:le*.

Donald L, B. and Boateng, D.A.D. (2017) ‘Method for the recovery of lithium from solutions by electrodialysis’, *Electronic Notes in Discrete Mathematics*, 63(19), pp. 303–310. Available at: <https://doi.org/10.1016/j.endm.2017.11.026>.

Dupont (2020) *Separation of Iron from Liquid Media*. Available at: [https://www.dupont.com/water/periodic-table/iron.html#:~:text=Separation of Iron from Liquid Media&text=Generally%2C ion exchange resins are,water and commercial process water. \(Accessed: 3 November 2022\)](https://www.dupont.com/water/periodic-table/iron.html#:~:text=Separation of Iron from Liquid Media&text=Generally%2C ion exchange resins are,water and commercial process water. (Accessed: 3 November 2022)).

Duyvesteyn, W.P.C. (1992) ‘Recovery of base metals from geothermal brines’, *Geothermics*, 21(5–6), pp. 773–799. Available at: [https://doi.org/10.1016/0375-6505\(92\)90030-D](https://doi.org/10.1016/0375-6505(92)90030-D).

Fleitlikh, I.Y., Grigorieva, N.A. and Logutenko, O.A. (2018) ‘Extraction of Non-Ferrous Metals and Iron with Systems based on Bis(2,4,4-Trimethylpentyl)Dithiophosphinic Acid (CYANEX 301), A Review’, *Solvent Extraction and Ion Exchange*, 36(1), pp. 1–21. Available at: <https://doi.org/10.1080/07366299.2017.1411034>.

Herdianita, N.R. and Kencana, A.Y. (2020) ‘Lithium in Brine Waters from The Indonesian Geothermal Systems : Could it Meet the National Needs of Making Lithium Batteries ?’, (May).

Hoshino, T. (2013) ‘Preliminary studies of lithium recovery technology from seawater by electrodialysis using ionic liquid membrane’, *Desalination*, 317, pp. 11–16. Available at: <https://doi.org/10.1016/j.desal.2013.02.014>.

ISO (2015) *ISO 14001: 2015. Environmental management systems – requirements with guidance for use. Final Draft*. Available at: <https://www.iso.org/obp/ui/#iso:std:iso:14001:ed-3:v1:en>.

Kern, D.Q. (1965) *Process Heat Transfer, Process Heat Transfer*. Available at: <https://doi.org/10.1016/B978-0-12-373588-1.X5000-1>.

Lee, D.A. *et al.* (1968) ‘Solvent extraction of lithium’, *Journal of Inorganic and Nuclear Chemistry*, 30(10), pp. 2807–2821. Available at: [https://doi.org/10.1016/0022-1902\(68\)80410-5](https://doi.org/10.1016/0022-1902(68)80410-5).

Li, L. *et al.* (2018) ‘Lithium recovery from aqueous resources and batteries: A brief review’, *Johnson Matthey Technology Review*, 62(2), pp. 161–176. Available at: <https://doi.org/10.1595/205651317X696676>.

Li, X. *et al.* (2019) 'Membrane-based technologies for lithium recovery from water lithium resources: A review', *Journal of Membrane Science*, 591(July), p. 117317. Available at: <https://doi.org/10.1016/j.memsci.2019.117317>.

Lloyd E. Brownell and Young, E.H. (1959) *Process Equipment Design*. United States of America: John Willey & Sons, Inc.

Lu, J. *et al.* (2018) 'Multilayered ion-imprinted membranes with high selectivity towards Li<sup>+</sup> based on the synergistic effect of 12-crown-4 and polyether sulfone', *Applied Surface Science*, 427, pp. 931–941. Available at: <https://doi.org/10.1016/j.apsusc.2017.08.016>.

Manao, R.D. *et al.* (2012) 'Recovery Garam Lithium pada Air Tua (Bittern) dengan Metode Presipitasi', *Jurnal Teknologi Kimia dan Industri*, 1(1), pp. 292–297.

Meshram, P., Pandey, B.D. and Mankhand, T.R. (2014) 'Extraction of lithium from primary and secondary sources by pre-treatment, leaching and separation: A comprehensive review', *Hydrometallurgy*, 150, pp. 192–208. Available at: <https://doi.org/10.1016/j.hydromet.2014.10.012>.

Mo, J.Y. and Jeon, W. (2018) 'The Impact of Electric Vehicle Demand and Battery Recycling on Price Dynamics of Lithium-Ion Battery Cathode Materials : A Vector Error Correction Model ( VECM ) Analysis'. Available at: <https://doi.org/10.3390/su10082870>.

Mroczek, E. *et al.* (2015) 'Lithium Extraction from Wairakei Geothermal Fluid using Electrodialysis', *Proceedings of the World Geothermal Congress 2015*, (April), p. 6.

Nachtigall, Daniel; Rübbelke, D. (2014) 'The green Paradox and Learning-by-Doing in the renewable energy sector The Green Paradox and Learning-by-Doing in the Renewable Energy Sector Daniel Nachtigall Dirk Rübbelke School of Business & Economics Discussion Paper Economics'.

Nasruddin *et al.* (2016) 'Potential of geothermal energy for electricity generation in Indonesia: A review', *Renewable and Sustainable Energy Reviews*, 53(2016), pp. 733–740. Available at: <https://doi.org/10.1016/j.rser.2015.09.032>.

Nur, A. *et al.* (2022) 'Jurnal de Jure', 14(April), pp. 18–28.

Ooi, K., Miyai, Y. and Katoh, S. (1986) 'Recovery of Lithium from Seawater by Manganese Oxide Adsorbent', *Separation Science and Technology*, 21(8), pp. 755–766. Available at: <https://doi.org/10.1080/01496398608056148>.

Opitz, A. *et al.* (2017) 'Can Li-Ion batteries be the panacea for automotive applications?', *Renewable and Sustainable Energy Reviews*, 68(September 2016), pp. 685–692. Available at: <https://doi.org/10.1016/j.rser.2016.10.019>.

Permana, Indra; AD, Nandaliarsyad; Qosam, A. (2017) 'Kajian potensi silica scaling pada pipa produksi pembangkit listrik tenaga panas bumi (geothermal)', 07(01), pp. 38–42.

Perry, R.H. (2008) *Perry's Chemical Engineers' Handbook*. 8th edn. Edited by D.W. Green. McGraw-Hill, Guanabara, Editora Ltda, Koogan.

Perry, R.H. and Green, D.W. (2007) *Chemical Engineer's Handbook*, 8th.

Peters, M.S. and Timmerhaus, K.D. (1991) *Plant Design and Economics for Chemical Engineers*. 4th Editio, *Plant design and economics for chemical engineers*. 4th Editio. Singapore: Singapore: Mc-Graw Hill.

'Physicochemical Problems of Mineral Processing' (2008), 42.

Powell, S.T. (1954) 'Water Conditioning for Indsutry', 78(1), pp. 1–4.

Quist-Jensen, C.A. *et al.* (2019) 'Perspectives on mining from sea and other alternative strategies for minerals and water recovery – The development of novel membrane operations', *Journal of the Taiwan Institute of Chemical Engineers*, 94, pp. 129–134. Available at: <https://doi.org/10.1016/j.jtice.2018.02.002>.

Razmjou, A. *et al.* (2019) 'Design principles of ion selective nanostructured membranes for the extraction of lithium ions', *Nature Communications*, 10(1), pp. 1–15. Available at: <https://doi.org/10.1038/s41467-019-13648-7>.

Ren, Y. *et al.* (2015) 'Oxide Electrolytes for Lithium Batteries', *Journal of the American Ceramic Society*, 98(12), pp. 3603–3623. Available at: <https://doi.org/10.1111/jace.13844>.

Roberts, D. *et al.* (2018) 'Science Editor', *Global warming of 1.5°C An* [Preprint].

Setiawan, F.A. *et al.* (2019) 'Kinetics of silica precipitation in geothermal brine with seeds addition: minimizing silica scaling in a cold re-injection system', *Geothermal Energy*, 7(1). Available at: <https://doi.org/10.1186/s40517-019-0138-3>.

Setyono, A.E. and Kiono, B.F.T. (2021) 'Dari Energi Fosil Menuju Energi Terbarukan: Potret Kondisi Minyak dan Gas Bumi Indonesia Tahun 2020 – 2050', *Jurnal Energi Baru dan Terbarukan*, 2(3), pp. 154–162. Available at: <https://doi.org/10.14710/jebt.2021.11157>.

Shen, X. *et al.* (2018) 'Beyond lithium ion batteries : Higher energy density battery systems based on lithium metal anodes', *Energy Storage Materials*, 12(November 2017), pp. 161–175. Available at: <https://doi.org/10.1016/j.ensm.2017.12.002>.

Sinnott, R.. (2005) 'Coulson & Richardson's Chemical Engineering Design', 6.

Sinnott, R. and Towler, G. (2019) *Chemical Engineering Design, Chemical Engineering Design: SI Edition*. Available at: <https://doi.org/10.1016/B978-0-08-102599-4.09980-X>.

Smith, J.M., Van Ness, H.C. and Abbott, M.M. (2005) *7th Edition Introduction to Chemical Engineering Thermodynamic*. 7th edn. McGraw-Hill.

Somrani, A., Hamzaoui, A.H. and Pontie, M. (2013) 'Study on lithium separation from

salt lake brines by nanofiltration (NF) and low pressure reverse osmosis (LPRO)', *Desalination*, 317, pp. 184–192. Available at: <https://doi.org/10.1016/j.desal.2013.03.009>.

Spasic, A.M., Manojlovic, V. and Jovanovic, M. (2020) 'Solvent extraction and entrainment problem', *Metallurgical and Materials Engineering*, 26(2), pp. 163–175. Available at: <https://doi.org/10.30544/480>.

Stringfellow, W.T. and Dobson, P.F. (2021) 'Technology for the recovery of lithium from geothermal brines', *Energies*, 14(20). Available at: <https://doi.org/10.3390/en14206805>.

Sulardjaka, S., Rahman, M.S. and Wahyudianto, C. (2013) 'Pengaruh Waktu Dan Temperatur Sinter Terhadap Densitas Dan Porositas Komposit Aluminium Yang Diperkuat Limbah Geothermal', *Rotasi*, 15(4), p. 28. Available at: <https://doi.org/10.14710/rotasi.15.4.28-32>.

Swain, B. (2016) 'Separation and purification of lithium by solvent extraction and supported liquid membrane, analysis of their mechanism: a review', *Journal of Chemical Technology and Biotechnology*, 91(10), pp. 2549–2562. Available at: <https://doi.org/10.1002/jctb.4976>.

Tchobanoglous, George; Burton, G. (1940) 'Wastewater Engineering Treatment and Reuse', *Notes and Queries*. Metcalf&Eddy, Inc, p. 317. Available at: <https://doi.org/10.1093/nq/179.18.317-a>.

Treyball, R.E. (1981) 'Treybal - 3rd Edition Mass Transfer Operations.pdf'. Singapore: McGraw-Hill.

Triwuri, N.A. and Handayani, M. (2018) 'Perairan Sungai Serayu Dengan Menggunakan', *Info Teknik*, 19(2), pp. 155–166.

Tsunami, P.G. dan (2019) 'Katalog Gempa Bumi Signifikan Dan Merusak 1821-2018', *Journal of Materials Processing Technology*, 1(1), pp. 1–8. Available at: <http://dx.doi.org/10.1016/j.cirp.2016.06.001%0A>.

Ulrich, G.D. (1984) *A Guide To Chemical Engineering Process Design and Economics*. John Wiley & Sons, Inc.

Vatavuk, W.M. (2002) 'Updating The CE Plant Cost Index', *Chemical Engineering*, (January), pp. 62–70.

Ventura, S. *et al.* (2016) 'Selective Recovery of Metals from Geothermal Brines', (December).

Ventura, S., Bhamidi, S. and Hornbostel, M. (2018) 'Selective Recovery of Lithium from Brines', *The California Energy Commission's (CEC)*, pp. 1–5. Available at: <https://www.sri.com>.

Verma, D.K., Maurya, N.K. and Kumar, P. (2022) 'Important Water Quality Parameters

in Aquaculture : An Overview Important Water Quality Parameters in Aquaculture : An Overview', *Agriculture and Environment*, 3(March), pp. 24–29.

Wilkomirsky, Igor; Condes, L. (1999) 'US Patent Number : 5,993,759 PRODUCTION OF LITHIUM CARBONATE FROM BRINES', *Self-steering railway bogie*.

Wilkomirsky, I. (1999) 'United States Patent: US005993759A', (19).

Wonosobo, P.K. (2021) 'KLHS RPJMD Kabupaten Wonosobo Tahun 2021-2026'.

Xu, J. *et al.* (2008) 'A review of processes and technologies for the recycling of lithium-ion secondary batteries', *Journal of Power Sources*, 177(2), pp. 512–527. Available at: <https://doi.org/10.1016/j.jpowsour.2007.11.074>.

Yaws, C.L. (1999) *Chemical Properties Handbook*, McGraw-Hill. Texas: McGraw-Hill.

Yaws, C.L. (2009) *Yaws Handbook of Thermodynamic Properties for Hydrocarbons and Chemicals*. Texas.

Zavahir, S. *et al.* (2021) 'A review on lithium recovery using electrochemical capturing systems', *Desalination*, 500(August), p. 114883. Available at: <https://doi.org/10.1016/j.desal.2020.114883>.

Zhu, X. *et al.* (2018) 'Recent advances on Fe- and Mn-based cathode materials for lithium and sodium ion batteries', *Journal of Nanoparticle Research*, 20(6). Available at: <https://doi.org/10.1007/s11051-018-4235-1>.