



LAPORAN HASIL PENELITIAN

“Kajian Efektivitas Absorpsi CO₂ Pada Pemurnian Biogas Dengan Menggunakan *Bittern* dan Larutan Alkali”

DAFTAR PUSTAKA

- Agustin, A. W., Sudarti & Yushardi., 2023. Potensi Pemanfaatan Biogas Dari Sampah Organik Sebagai Sumber Energi Terbarukan. *INSOLOGI: Jurnal Sains dan Teknologi*, 2(6), pp. 1109-1116.
- Apriani, M., Hadi, W. & Masduqi, A., 2018. Physicochemical Properties of Sea Water and *Bittern* in Indonesia: Quality Improvement and Potential Resources Utilization for Marine Environmental Sustainability. *Journal of Ecological Engineering*, 19(3), pp. 1-10.
- Cruz, R. A., Flores, B. E. S., Gonzales, J. T., Lopez, R. A. & Castaneda. F., 2012. Insights in the development of a new method to treat H₂S and CO₂ from sour gas by alkali. *Fuel*, pp. 173-176.
- Ernawati, Y., Yulistia. E. & Alamsyah, P., 2023. Prospek dan Potensi Biogas sebagai Energi Alternatif Menghadapi Krisis Energi. *Unbara Environmental Engineering Journal*, Vol. 3, No. 2, pp. 1-6.
- Estay, H., Barros, L. & Troncoso, E., 2021. Metal Sulfide Precipitation: Recent Breakthroughs and Future Outlooks. *Minerals*. pp. 1-27.
- Fahmayanti, Y. & Abtokhi, A., 2018. The Addition Effect Of NaOH And KOH Toward Biogas Purification. *Jurnal Neutrino: Jurnal Fisika dan Aplikasinya*, 10(2), pp. 41-45.
- Ghosh, U. K., Kentish, S. E., Stevens, G. W., 2009. Absorption of Carbon Dioxide into Aqueous Potassium Carbonate Promoted by Boric Acid. *Energy Procedia*, 1 (1), pp. 1075–1081.
- Han, S. J., Yoo, M., Kim, D. W., Wee, J. H., 2011. Carbon Dioxide Capture Using Calcium Hydroxide Aqueous Solution as the Absorbent. *Energy and Fuels.*, 25 (8), pp. 3825–3834.



LAPORAN HASIL PENELITIAN

“Kajian Efektivitas Absorpsi CO₂ Pada Pemurnian Biogas Dengan Menggunakan *Bittern* dan Larutan Alkali”

- Hardianto, A., Hermawan, D., 2019. Pengaruh Filterisasi Bertingkat Larutan KOH, NaOH dan TEA Terhadap Penurunan Persentase CO₂ pada Biogas. *Jurnal Flywheel.*, Vol. 10, No.1, pp. 43-54.
- Kohl, A. & Nielsen, R., 1997. *Gas Purification Fifth Edition*. Texas : Gulf Publishing Company. pp. 40-186.
- Li, H., 2023. Review of carbon dioxide mineralization of magnesium-containing materials. *Carbon Neutralization*, 2:574–584.
- Lim, J., Kim, D. J., Cho, H. & Kim, J., 2022. Design of novel seawater *Bittern* recovery process for CO₂ and SO_x utilization. *Desalination*. Pp. 1-40.
- Mardawati, E., Faruqy, M., Z., A., Wiyatna, M., F., 2024. Produksi Biogas Co-digestion dari Kotoran Sapi, Limbah Buah Sayuran, dan Serasah Daun di Universitas Padjadjaran. *Biomass, Biorefinery, and Bioeconomy.*, Vol. 2, No. 2, pp. 151-160.
- Muntaha, N., Rain, M. I., Lipiar K. M. O. Goni, Md. Shaikh, A. A., Jamal, M. S., Hossain, M., 2022. A Review on Carbon Dioxide Minimization in Biogas Upgradation Technology by Chemical Absorption Processes. *ACS Omega*. Vol. 7, No. 38, pp. 33680–33698.
- Moreno, F. M. B., Galan, M. R., Vega, F., Reina T. R., Vilches, L. F., Navarrete, B., 2019. Converting CO₂ from Biogas and MgCl₂ Residues into Valuable Magnesium Carbonate: a Novel Strategy for Renewable Energy Production. *Energy*. Pp. 457-464.
- Mourad, A. A. H. I., Mohammad, A. F., Al-Marzuqi, A. H., El-Naas, M. H., Al-Marzouqi. M. H., Altarawneh, M., 2022. CO₂ Capture and Ions Removal Through Reaction with Potassium Hydroxide in Desalination *Reject brine*:
-



LAPORAN HASIL PENELITIAN

“Kajian Efektivitas Absorpsi CO₂ Pada Pemurnian Biogas Dengan Menggunakan *Bittern* dan Larutan Alkali”

Statistical Optimization. *Chemical Engineering & Processing : Process Intensification*. pp. 1-13.

Na, C. K. *et.al.* 2017. Utilization of waste *Bittern* from saltern as a source for magnesium and an absorbent for carbon dioxide capture. *Environ Sci Pollut Res*. pp. 1-10.

Nayak, N. 2018. Major and Trace Element Determination in Brine and *Bittern*. *PARIPEX : Indian Journal of Research*. Vol. 7, No. 7, pp. 36-38.

Rahmat, F. N., Sudarti & Yushardi., 2022. Analisis Pemanfaatan Sampah Organik Menjadi Energi Alternatif Biogas. *Jurnal Energi Baru & Terbarukan*, 4(2), pp. 118-122.

Robiah, R., Renaldi, U. & Melani, A., 2021. Kajian Pengaruh Laju Alir Naoh Dan Waktu Kontak Terhadap Absorpsi Gas Co₂ Menggunakan Alat Absorber Tipe Sieve Tray. *Distilasi*, 6(2), pp. 27-35.

Samnur, Irfan, A. M., 2011. Analisis Kesetaraan Nilai Kalor LPG dengan Biogas dari Biodigester Skala Rumah Tangga. *TEKNOLOGI*. Vol. 14, No. 2, pp. 103-110.

Santos, H. S., Nguyen, H., Venancio, F., Ramteke, D., Zevenhoven, R., Kinnunen, P., 2023. Mechanisms of Mg carbonates precipitation and implications for CO₂ capture and utilization/ storage. *Inorganic Chemistry Frontiers*. Vol. 10, No. 9, pp. 2507-2546.

Soo, X. Y. D., Lee, J. J. C., Wu, W., Tao, L., Wang, C., Zhu, Q., Bu, J., 2024. Advancements in CO₂ Capture by Absorption and Adsorption: A Comprehensive Review. *Journal of CO₂ Utilization*. pp. 5-21.



LAPORAN HASIL PENELITIAN

“Kajian Efektivitas Absorpsi CO₂ Pada Pemurnian Biogas Dengan Menggunakan *Bittern* dan Larutan Alkali”

Yan, R., Chin, T., Ling, Y., Duan, H., Liang, D. T. & Tay, J. H., 2004. Influence of Surface Properties on the Mechanism of H₂S Removal by Alkaline Activated Carbon. *Environmental Science and Technology*. Vol. 38, No. 1, pp. 316-323.

Yoo, M., Han, S. J., Wee, J. H., 2013. Carbon Dioxide Capture Capacity of Sodium Hydroxide Aqueous Solution. *J. Environ. Manage.*, 114, pp. 512–519.