

■ 「主要論文 (直近 5 年)」

- Kotaro Ouchida, Yuichiro Kanematsu, Yasuhiro Fukushima, Satoshi Ohara, Akira Sugimoto, Taiichiro Hattori, Yoshifumi Terajima, Tatsuya Okubo, Yasunori Kikuchi, Coordinated Integration of Agricultural and Industrial Processes: A Case Study of Sugarcane-Derived Production, Process Integration and Optimization for Sustainability, accepted <https://doi.org/10.1007/s41660-023-00337-8>.
- Fanran Meng, Andreas Wagner, Alexandre B. Kremer, Daisuke Kanazawa, Jane J. Leung, Peter Goult, Min Guan, Sophie Herrmann, Eveline Speelman, Pim Sauter, Shajeeshan Lingeswaran, Martin M. Stuchtey, Katja Hansen, Eric Masanet, André C. Serrenho, Naoko Ishii, Yasunori Kikuchi, Jonathan M. Cullen, Planet compatible pathways for transitioning the chemical industry, Proceedings of the National Academy of Sciences, 120 (8) (2023) e2218294120, <https://doi.org/10.1073/pnas.2218294120>
- Aya Heiho, Izuru Suwa, Yi Dou, Soowon Lim, Takao Namihira, Taketoshi Koita, Kazuhiro Mochidzuki, Shinsuke Murakami, Ichiro Daigo, Chiharu Tokoro, Yasunori Kikuchi, Prospective life cycle assessment of recycling systems for spent photovoltaic panels by combined application of physical separation technologies, Resources, Conservation & Recycling, 192, (2023) 106922. <https://doi.org/10.1016/j.resconrec.2023.106922>
- Ayumi Yamaki, Shoma Fujii, Yuichiro Kanematsu, Yasunori Kikuchi, Life cycle greenhouse gas emissions of cogeneration energy hubs at Japanese paper mills with thermal energy storage, Energy, 270(1), 126886, <https://doi.org/10.1016/j.energy.2023.126886>
- Tatsuya Okubo, Teruyuki Shimizu, Kei Hasegawa, Yasunori Kikuchi, Sergei Manzhos, Manabu Ihara, Factors affecting the techno-economic and environmental performance of on-grid distributed hydrogen energy storage systems with solar panels, Energy, 269, (2023), 126736, <https://doi.org/10.1016/j.energy.2023.126736>.
- Yasunori Kikuchi, Noriko Torizaki, Leena Tähkämö, Annamari Enström, Sari Kuusisto, Life cycle greenhouse gas emissions of biomass- and waste-derived hydrocarbons considering uncertainties in available feedstocks, Process Safety and Environmental Protection, 166, 693-703, (2022) <https://doi.org/10.1016/j.psep.2022.08.054>
- 五十嵐和樹, 栗島英明, 菊池康紀, 種子島における再生可能エネルギーを用いた Vehicle-to-Grid システムの評価、環境情報科学論文集, 36, 87-92, 2022. https://doi.org/10.11492/ceispapers.ceis36.0_87

- 下野僚子、堀内美佐、兵法彩、菊池康紀、大久保達也、自治体健康づくり事業におけるプロセス管理のためのチェックポイント導出手法：啓発イベントを事例として、品質、52(4) 41-52, 2022. https://doi.org/10.20684/quality.52.4_263
- Shoma Fujii, Yuko Oshita, Yasunori Kikuchi, Satoshi Ohara, Estimation of Relative Resource Circulation for Heat Exchangers Using Material Flow Analysis for Air Conditioners, *International Journal of Automation Technology*, 16(6) 737-746, (2022) <https://doi.org/10.20965/ijat.2022.p0737>
- Shoma Fujii, Takao Nakagaki, Yuichiro Kanematsu, Yasunori Kikuchi. Prospective life cycle assessment for designing mobile thermal energy storage system utilizing zeolite, *Journal of Cleaner Production*, 365, 132592, (2022) <https://doi.org/10.1016/j.jclepro.2022.132592>
- Fanran Meng, Andreas Wagner, Alexandre B. Kremer, Daisuke Kanazawa, Jane J. Leung, Peter Goult, Min Guan, Sophie Herrmann, Eveline Speelman, Pim Sauter, Shajeeshan Lingeswaran, Martin M. Stuchtey, Katja Hansen, Eric Masanet, André C. Serrenho, Naoko Ishii, Yasunori Kikuchi, Jonathan M. Cullen, Planet compatible pathways for transitioning the chemical industry, *ChemRxiv*, (2022) <https://doi.org/10.26434/chemrxiv-2022-hx17h>
- Shoma Fujii, Yuichiro Kanematsu, Yasunori Kikuchi, Takao Nakagaki, Effect of bagasse drying on thermal energy storage utilizing zeolite water vapor ad/desorption at a sugar mill, *Journal of Energy Storage*, 51, 104495 (2022)
- Thor Alexis Sazon, Teruyuki Shimizu, Yasuhiro Fukushima, Tadafumi Adschiri, Yasunori Kikuch, Energy intensity in applying low-temperature chemical looping in steam reforming, *Process Safety and Environmental Protection*, 159, 850-861 (2022). <https://doi.org/10.1016/j.psep.2022.01.057>.
- Disni Gamaralalage, Yuichiro Kanematsu, Denny K. S. Ng, Steve Z. Y. Foong, Viknesh Andiappan, Dominic C. Y. Foo, Yasunori Kikuchi, Life cycle assessment of international biomass utilization: A case study of Malaysian palm kernel shells for biomass power generation in Japan, *Waste and Biomass Valorization*, 13, 2717-2733, (2022) <https://doi.org/10.1007/s12649-021-01643-3>
- Yu Shimada, Tetsuya Ishida, Yuki Kato, Hisanori Uwagami, Yasuhito Kato, Yuichiro Kanematsu, Yasunori Kikuchi, Satoshi Ohara, Material Balance and Energy Consumption in the Factory-scale Coproduction of Glucan and Mannan from Yeast Extract Residue, *Food Science and Technology Research*, 27(6), 871-880 (2021) doi: 10.3136/fstr.27.871
- Teruyuki Shimizu, Yasunori Kikuchi, Regional suitability for energy carriers in Japan considering socioeconomic conditions and environmental performance,

- Journal of Cleaner Production, 318, 128461 (2021), <https://doi.org/10.1016/j.jclepro.2021.128461>
- Yasunori Kikuchi, Izuru Suwa, Aya Heiho, Yi Dou, Soowon Lim, Takao Namihira, Kazuhiro Mochidzuki, Taketoshi Koita, Chiharu Tokoro, Separation of cathode particles and aluminum current foil in lithium-ion battery by high-voltage pulsed discharge Part II: Prospective life cycle assessment based on experimental data, Waste Management, 132, 86-95 (2021) <https://doi.org/10.1016/j.wasman.2021.07.016>
 - Yuichiro Kanematsu, Yasunori Kikuchi, Hiroyuki Yano, Life Cycle Greenhouse Gas Emissions of Acetylated Cellulose Nanofiber-reinforced Polylactic Acid Based on Scale-up from Lab-scale Experiments, ACS Sustainable Chemistry & Engineering, 9(31), 10444-10452 (2021), <https://doi.org/10.1021/acssuschemeng.0c09250>
 - 藤井祥万、宮川大河、中垣隆雄、兼松祐一郎、菊池康紀、濱田洋輔、製糖工場の未利用エネルギーを蓄熱する向流接触式ヒートチャージャーのベンチスケール実証試験と設計 (Bench-scale Demonstration Test and Design of a Moving Bed Counter-flow Heat Charger to Charge Unused Energy from Sugar Mill), 化学工学論文集, 47(6) 191-199 (2021) <https://doi.org/10.1252/kakoronbunshu.47.191>
 - 兵法彩、菊池康紀、市町村産業連関表の作成・応用実態に基づく作表フローの構築、日本 LCA 学会誌、17(3), 174-192 (2021) <https://doi.org/10.3370/lca.17.174>
 - Narihisa Sako, Michihisa Koyama, Tatsuya Okubo, Yasunori Kikuchi, Techno-economic and life cycle analyses of battery-assisted hydrogen production systems from photovoltaic power, Journal of Cleaner Production, 298, 126809, 2021, <https://doi.org/10.1016/j.jclepro.2021.126809>
 - Chiharu Tokoro, Soowon Lim, Kaito Teruya, Masataka Kondo, Kazuhiro Mochidzuki, Takao Namihira, Yasunori Kikuchi, Separation of cathode particles and aluminum current foil in Lithium-ion battery by high-voltage pulsed discharge part I: Experimental investigation, Waste Management, 125, 58-66 (2021) <https://doi.org/10.1016/j.wasman.2021.01.008>
 - Chiharu Tokoro, Soowon Lim, Yukihiro Sawamura, Masataka Kondo, Kazuhiro Mochidzuki, Taketoshi Koita, Takao Namihira and Yasunori Kikuchi, Copper/Silver Recovery from Photovoltaic Panel Sheet by Electrical Dismantling Method, International Journal of Automation Technology, 14(6), 966-974 (2020) <https://doi.org/10.20965/ijat.2020.p0966>
 - Yasunori Kikuchi, Aya Heiho, Yi Dou, Izuru Suwa, I-Ching Chen, Yasuhiro Fukushima, and Chiharu Tokoro, Defining Requirements on Technology Systems Assessment from Life Cycle Perspectives: Cases on Recycling of Photovoltaic and

- Secondary Battery, *International Journal of Automation Technology*, 14(6), 890-908 (2020) <https://doi.org/10.20965/ijat.2020.p0890>
- Karina Vink, Eriko Ankyu, Yasunori Kikuchi, Long-Term Forecasting Potential of Photo-Voltaic Electricity Generation and Demand Using R, *Applied Science*, 2020, 10(13), 4462; <https://doi.org/10.3390/app10134462>
 - Ayumi Yamaki, Yuichiro Kanematsu, Yasunori Kikuchi, Life cycle greenhouse gas emissions of thermal energy storage implemented into a paper mill for wind energy utilization, *Energy*, 205, 118056, (2020) <https://doi.org/10.1016/j.energy.2020.118056>
 - Yasunori Kikuchi, Miwa Nakai, Yuichiro Kanematsu, Kazutake Oosawa, Tatsuya Okubo, Yuko Oshita, Yasuhiro Fukushima, Application of technology assessments into co-learning for regional transformation: A case study of biomass energy systems in Tanegashima, *Sustainability Science*, 15, 1473-1494 (2020) <https://doi.org/10.1007/s11625-020-00801-1>
 - 兵法彩, 下野僚子, 堀内美佐, 大久保達也, 菊池康紀, 和歌山県の健康に関する啓発イベントを対象とした産業連関分析, *日本 LCA 学会誌*, (Input-Output Analysis of a Health Promotion Event in Wakayama Prefecture, *Journal of Life Cycle Assessment, Japan*) (2020) 16(2) 130 - 142
 - 堀内美佐, 兵法彩, 下野僚子, 大久保達也, 菊池康紀, 健康づくりに関する啓発イベントの評価に伴う作業負担の定量化, *保健師ジャーナル*, (Workload quantification of survey for health promotion event, *The Japanese Journal for Public Health Nurse*), (2020) 76(7)
 - Teruyuki Shimizu, Kei Hasegawa, Manabu Ihara, Yasunori Kikuchi, A Region-Specific Environmental Analysis of Technology Implementation of Hydrogen Energy in Japan Based on Life Cycle Assessment, *Journal of Industrial Ecology*, 2020;24:217-233, <https://doi.org/10.1111/jiec.12973>
 - 兵法彩, 兼松祐一郎, 永瀬萌, 村上進亮, 所千晴, 菊池康紀, 使用済み電気電子廃棄物からの資源回収技術のライフサイクル評価: ドラム型チェーン攪拌破碎機によるタンタル回収 (Life cycle assessment of resource recovery from waste electrical and electronic equipment: A case study of Tantalum recovery by chain-using drum-typed impact mill) 、 *化学工学論文集*、 45(6), 244-252 (2019) <https://doi.org/10.1252/kakoronbunshu.45.244>
 - Chun Sheng Goh, Takanobu Aikawa, Amanda Ahl, Kanae Ito, Chihiro Kayo, Yasunori Kikuchi, Yasuo Takahashi, Takaaki Furubayashi, Toshihiko Nakata, Yuichiro Kanematsu, Osamu Saito, Yoshiki Yamagata, Rethinking sustainable bioenergy development in Japan: Decentralised system supported by local forestry

biomass, Sustainability Science, 15, 1461-1471 (2020)
<https://doi.org/10.1007/s11625-019-00734-4>

- 中井美和, 栗栖俊之, 神園奉和, 柿内康志, 大久保達也, 菊池康紀, エネルギーの経験学習がリテラシーと選好に与える影響の分析～種子島の高校生を対象として～(Miwa Nakai, Toshiyuki Kurisu, Tomokazu Kamizono, Yasushi Kakiuchi, Tatsuya Okubo, Yasunori Kikuchi, The impact of workshops on energy literacy and preferences: A case of high school students in Tanegashima island)、日本 LCA 学会誌、15(4), 343-359 (2019) <https://doi.org/10.3370/lca.15.343>
- 尾下優子、兵法彩、大内田弘太郎、兼松祐一郎、福島康裕、菊池康紀、技術導入による社会経済的影響の評価：種子島地域エネルギーシステムにおける産業連関分析の例 (Analyzing socio-economic effect induced by technology implementation on available renewables: A case study of Tanegashima, Japan)、日本 LCA 学会誌、15(4), 360-376 (2019) <https://doi.org/10.3370/lca.15.360>
- Kotaro Ouchida, Yasuhiro Fukushima, Satoshi Ohara, Akira Sugimoto, Taiichiro Hattori, Yoshifumi Terajima, Tatsuya Okubo, Yasunori Kikuchi, Integrated Sugarcane Farming and Sugar Milling with Selective Fermentation: A Simulation-Based Approach, Journal of Cleaner Production, 236 (1) 117521 (2019) <https://doi.org/10.1016/j.jclepro.2019.06.352>
- Akira Yoko, Yasuhiro Fukushima, Tadaaki Shimizu, Yasunori Kikuchi, Teruyuki Shimizu, Alexander Guzman-Urbina, Kakeru Ouchi, Haruka Hirai, Gimyeong Seong, Takaaki Tomai, Tadafumi Adschiri, Process Assessments for Low-Temperature Methane Reforming Using Oxygen Carrier Metal Oxide Nanoparticles, Chemical Engineering & Processing: Process Intensification, 142, 107531 (2019) <https://doi.org/10.1016/j.cep.2019.107531>
- Shoma Fujii, Naoyuki Horie, Ko Nakaibayashi, Yuichiro Kanematsu, Yasunori Kikuchi, Takao Nakagaki, Design of zeolite boiler in thermochemical energy storage and transport system utilizing unused heat from sugar mill. Applied Energy, 238, 561-571, (2019) <https://doi.org/10.1016/j.apenergy.2019.01.104>
- 小原聡、菊池康紀、大内田弘太郎、杉本明、服部太一郎、安原貴臣、福島康裕、砂糖・エタノール逆転型複合生産システムの導入による温室効果ガス排出量削減効果 (Reduction of greenhouse gas emission in the introduction of Inversion system to produce sugar and ethanol from sugarcane)、日本 LCA 学会誌、15(1), 86-100, (2019) <https://doi.org/10.3370/lca.15.86>
- Yasunori Kikuchi, Takayuki Ichikawa, Masakazu Sugiyama, Michihisa Koyama, Battery-assisted low-cost hydrogen production from solar energy: Rational target setting for future technology systems, International Journal of Hydrogen Energy, 44,

1451-1465, (2019) <https://doi.org/10.1016/j.ijhydene.2018.11.119>