

先進社会環境学専攻

基幹講座

資源戦略学講座

環境複合材料創成科学分野

【論文】

● Controlled introduction of defects into single-walled carbon nanotubes via a fluorination-defluorination strategy using xenon difluoride and their alkaline oxygen reduction reaction catalytic activity. [Journal of Colloid and Interface Science, 627, (2022), pp. 168-179] Koji Yokoyama, Issei Mamiya, Hiromu Morita, Yoshinori Sato, Kenta Sato, Tetsuo Nishida, Yoshinori Sato

環境素材設計学分野

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● Calcium phosphate cements comprising spherical porous calcium phosphate granules: synthesis, structure, and properties. [Journal of Asian Ceramic Societies, 10(4), (2022), pp. 731-738] Masanobu Kamitakahara, Kanau Asahara, Hideaki Matsubara

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● Sustainable process for enhanced CO₂ mineralization of calcium silicates using a recyclable chelating agent under alkaline conditions. [Journal of Environmental Chemical Engineering, 10(1), (2022), 107055] Jiajie Wang, Noriaki Watanabe, Kosuke Inomoto, Masanobu Kamitakahara, Kengo Nakamura, Takeshi Komai, Noriyoshi Tsuchiya

● 超微粒超硬合金の曲げ破壊の実験とDEMシミュレーション. [粉体および粉末冶金, 69, (2022), pp. 249-256] 加藤大夢, 松原秀彰, 寺坂宗太, 高田真之, 上高原理暢

【総説・解説】

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環境修復生態学分野

● Arsenic uptake by *Pteris vittata* in a subarctic arsenic-contaminated agricultural field in Japan: An 8-year study. [Science of The Total Environment, 831, (2022), 154830] Yi Huang-Takeshi Kohda, Ginro Endo, Nobuyuki Kitajima,

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● Efficient biodegradation of 1,4-dioxane commingled with additional organic compound: Role of interspecies interactions within consortia. [Chemosphere, 308(3), (2022), 136440] Tanmoy Roy Tusher, Chihiro Inoue, Mei-Fang Chien

● Empirical Evidence of Arsenite Oxidase Gene as an Indicator Accounting for Arsenic Phytoextraction by *Pteris vittata*. [International Journal of Environmental Research and Public Health, 19(3), (2022), 1796] Ning Han, Chongyang Yang, Shunya Shimomura, Chihiro Inoue, Mei-Fang Chien

● From Surface Water to the Deep Sea: A Review on Factors Affecting the Biodegradation of Spilled Oil in Marine Environment. [Journal of Marine Science and Engineering, 10(3), (2022), 426] Hernando Pactao Bacosa, Sheila Mae B. Ancla, Cris Gel Loui A. Arcadio, John Russel A. Dalogdog,

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地球物質・エネルギー学分野

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● Continental arc-derived eclogite in the Zavkhan Terrane, western Mongolia: Implications for the suture zone in the northern part of the Central Asian Orogenic Belt. [Journal of Asian Earth Sciences, 229, (2022), 105150] Bayarbold, M., Okamoto, A., Dandar, O., Uno, M., Tsuchiya, N.

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● Development of open transport of aqueous fluid from pegmatite revealed by trace elements in garnet. [Geofluids, (2022), 8786250] Astin Nurdiana, Atsushi Okamoto, Masaaki Uno, Noriyoshi Tsuchiya

● High-temperature silicified zones as potential caprocks of supercritical geothermal reservoirs. [Geothermics, 105, (2022), 102475] Fajar Febiani Amanda, Noriyoshi Tsuchiya, Vani Novita Alviani, Masaaki Uno, Ryoichi Yamada, Shota Shimizu, Ryosuke Oyanagi

● Machine-learning techniques for quantifying the protolith composition and mass transfer history of metabasalt. [Scientific Reports, 12(1), (2022), 1385] Matsuno, S., Uno, M., Okamoto, A., Tsuchiya, N.

● Slab-derived fluid storage in the crust elucidated by earthquake swarm. [Communications Earth & Environment, 3(1), (2022), 286] Yusuke Mukuhira, Masaaki Uno, Keisuke Yoshida

● Volatile-consuming reactions fracture rocks and self-accelerate fluid flow in the lithosphere. [Proceedings of the National Academy of Science, 119(3), (2022), e2110776118] Masaaki Uno, Kodai Koyanagawa, Hisamu Kasahara, Atsushi Okamoto, Noriyoshi Tsuchiya

【総説・解説】

● 岩石の「模様」から地下の流体反応プロセスを解読する. [地球惑星科学連合ニュースレター誌, 18(1), (2022), pp. 10-11] 岡本敦

● 沈み込み帯の含水マントルの炭酸塩化作用—自己促進的な反応—破壊カップリング現象—. [月刊地球 11-12 月合併号, (2022), pp. 566-572, 海洋出版] 岡本敦

地球開発環境学分野（高橋弘研）

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● Effects of agricultural by-product on mechanical properties of cemented waste soil. [Journal of Cleaner Production, 365, (2022), 132814] Nga Thanh Duong, Khiem Quang Tran, Tomoaki Satomi, Hiroshi Takahashi

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地球開発環境学分野（坂口研）

【論文】

● A numerical study on the creation of artificial supercritical geothermal reservoirs by hydraulic fracturing. [Geothermics, 105, (2022), 102500] Kimio Watanabe, Norihiro Watanabe, Noriaki Watanabe, Kiyotoshi Sakaguchi, Masaatsu Aichi, Hisanao Ouchi, Hiroshi Asanuma

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● Erratum to “CO₂ injection-induced complex cloud-fracture networks in granite at conventional and superhot geothermal conditions” [Geothermics 97 (2021) 102265]. [Geothermics, 101, 102340] Eko Pramudyo, Ryota Goto, Noriaki Watanabe, Kiyotoshi Sakaguchi, Kengo Nakamura, Takeshi Komai

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エネルギー資源学講座

分散エネルギーシステム学分野

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● Deformation mechanism of Ni(O)-yttria-stabilized zirconia upon reduction and its effect on cell stress evolution in solid oxide fuel cells. [Journal of Power Sources, 550, (2022), 232116] Junya Tanaka, Kazuhisa Sato, Keiji Yashiro, Tatsuya Kawada, Toshiyuki Hashida

● Effects of temperature and hydrogen concentration during reduction on deformation behavior of NiO-yttria stabilized zirconia used in solid oxide fuel cells. [Journal of Power Sources, 535, (2022), 231384] Junya Tanaka, Kazuhisa Sato, Keiji Yashiro, Tatsuya Kawada, Toshiyuki Hashida

● Performance and stability analysis of SOFC containing thin and dense gadolinium-doped ceria interlayer sintered at low temperature. [Journal of Materiomics, 8(2), (2022), pp. 347-357] Yige Wang, Chuan Jia, Zewei Lyu, Minfang Han, Junwei Wu, Zaihong Sun, Fumitada Iguchi, Keiji Yashiro, Tatsuya Kawada

エネルギー資源リスク評価学分野

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- A geochemical approach for source apportionment and environmental impact assessment of heavy metals in a Cu-Ni mining region, Botswana. [Environmental Earth Sciences, 81(5), (2022), Article 138] Fiona Motswaiso, Jiajie Wang, Kengo Nakamura, Noriaki Watanabe, Takeshi Komai
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- Effectiveness and characteristics of atmospheric CO₂ removal in croplands via enhanced weathering of industrial Ca-rich silicate byproducts. [Frontiers in Environmental Science, 10, (2022), 1068656] Rina Yoshioka, Kengo Nakamura, Ryota Sekiai, Jiajie Wang, Noriaki Watanabe
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- Significance of soil moisture on temperature dependence of Hg emission. [Journal of Environmental Management, 305, (2022), 114308] S. Zhao, A. Terada, K. Nakamura, M. Nakashima, T. Komai, S. Riya, M. Hosomi, H. Hou
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in groundwater of Nawalparasi-West, Nepal: an investigation with suggested countermeasures for South Asian Region. [Environmental Monitoring and Assessment, 194, (2022), 582] Tunisha Gyawali, Susmita Pant, Keizo Nakamura, Takeshi Komai, Shukra Raj Paudel

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- 不飽和土壌からの揮発性化合物の揮発フラックスの定量的予測モデルの開発—土壌カラム試験のヒストリーマッチングによる関連パラメータの検証—. [土木学会論文集 G (環境), 78(3), (2022), pp. 87-103] 近藤 萌波, 坂本 靖英, 川辺 能成, 中村 謙吾, 渡邊 則昭, 駒井 武

環境共生機能学分野

【論文】

- Controlled introduction of defects into single-walled carbon nanotubes via a fluorination-defluorination strategy using xenon difluoride and their alkaline oxygen reduction reaction catalytic activity. [Journal of Colloid and Interface Science, 627, (2022), pp. 168-179] Koji Yokoyama, Issei Mamiya, Hiromu Morita, Yoshinori Sato, Kenta Sato, Tetsuo Nishida, Yoshinori Sato

国際エネルギー資源学分野

【論文】

- A geochemical approach for source apportionment and environmental impact assessment of heavy metals in a Cu-Ni mining region, Botswana. [Environmental Earth Sciences, 81(5), (2022), Article 138] Fiona Motswaiso, Jiajie Wang, Kengo Nakamura, Noriaki Watanabe, Takeshi Komai
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- Estimation of an ultra-high-temperature geothermal reservoir model in the Kakkonda geothermal field, northeastern Japan. [Geothermics, 105, (2022), 102525] Yota Suzuki, Takashi Akatsuka, Yusuke Yamaya, Norihiro Watanabe, Kyosuke Okamoto, Kazumi Osato, Tatsuya Kajiwara, Yasuo Ogawa, Toru Mogi, Noriyoshi Tsuchiya, Hiroshi Asanuma
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【総説・解説】

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- ナッジの設計における進化シミュレーションの活用—特集 エネルギーシステムの進化とOR. [オペレーションズ・リサーチ, 67(12), (2022), pp. 676-681] 小松秀徳, 窪田ひろみ, 田中伸幸, 大橋弘忠
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環境政策学講座

環境・都市エネルギー学分野

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- A framework to evaluate the energy-environment-economic impacts of developing rooftop photovoltaics integrated with electric vehicles at city level. [Renewable Energy, 200, (2022), pp. 647-657] Junling Liu, Mengyue Li, Liya Xue, Takuro Kobashi
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- Energy infrastructure transitions with PV and EV combined systems using techno-economic analyses for decarbonization in cities. [Applied Energy, 319, (2022), 119254] Soowon Chang, Jun-young Cho, Jae Heo, Junsuk Kang, Takuro Kobashi
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- 【総説・解説】
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環境・エネルギー経済学分野

【論文】

● A solid-state electrolysis process for upcycling aluminium scrap. [Nature, 606, (2022), pp. 511-515] Xin Lu, Zhengyang Zhang, Takehito Hiraki, Osamu Takeda, Hongmin Zhu, Kazuyo Matsubae, Tetsuya Nagasaka

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産業エコロジー分野

【論文】

● Differentiated responsibilities of US citizens in the country's sustainable dietary transition. [Environmental Research Letters, 17(7), (2022), 074037] Oliver Taherzade,

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【総説・解説】

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寄附講座 (DOWAホールディングス)

環境物質政策学講座

地圏環境政策学分野

【論文】

● リチウムイオン電池の資源性と将来展望 電池関連制度の海外動向に関する考察—EUのリチウムイオン電池関連制度を中心として—. [廃棄物資源循環学会誌, 33(3), (2022), pp. 204-213] 齋藤優子, 白鳥寿一

連携講座

環境リスク評価学分野 (産業技術総合研究所)

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