

B. 研究活動

1. 研究論文

物質化学科

- Masatsugu Fujishige, Winadda Wongwiriyaan, Hiroyuki Muramatsu, Kenji Takeuchi, Susumu Arai
Field emission properties of a DWCNT bundle and a single MWCNT. *J. Phys. Chem. Solids*, 113, 229-234, 2018.
- Masahiro Shimizu, Makoto Umeki, Susumu Arai
Suppressing the effect of lithium dendritic growth by the addition of magnesium bis(trifluoromethanesulfonyl) amide. *Phys. Chem. Chem. Phys.*, 20, 1127-1133, 2018.
- Masahiro Shimizu, Ryosuke Yatsuzuka, Masaomi Horita, Takahiro Yamamoto, Susumu Arai
Design of roughened current collector by bottom-up approach using the electroplating technique: charge-discharge performance of a Sn negative-electrode for Na-ion batteries. *J. Phys. Chem. C*, 121, 49, 27285-27294, 2017.
- Masahiro Shimizu, Yuji Tsushima, Susumu Arai
Electrochemical Na-insertion/extraction property of Ni-coated black-phosphorus prepared by an electroless deposition method. *ACS Omega*, 2, 8, 4306-4315, 2017.
- Susumu Arai, Kyohei Kirihata, Masahiro Shimizu, Miyoka Ueda, Arinobu Katada, Mitsugu Uejima
Fabrication of copper/single-walled carbon nanotube composites by electrodeposition using free-standing nanotube film. *J. Electrochem. Soc.*, 164, 13, D922-D929, 2017.
- Hiroyuki Usui, Yasuhiro Domi, Kohei Fujiwara, Masahiro Shimizu, Takayuki Yamamoto, Toshiyuki Nohira, Rika Hagiwara, Hiroki Sakaguchi
Charge-discharge properties of a Sn₄P₃ Negative electrode in ionic Liquid electrolyte for Na-ion batteries. *ACS Energy Lett.*, 2, 5, 1139-1143, 2017.
- Masahiro Shimizu, Mendsaikhan Munkhbat, Susumu Arai
Li-insertion/extraction properties of three-dimensional Sn electrode prepared by facile electrodeposition method. *J. Appl. Electrochem.*, 47, 6, 727-734, 2017.
- Kenta Kawashima, Mirabbos Hojamberdiev, Christina Stabler, Dragoljub Vrankovic, Kunio Yubuta, Ralf Riedel, Kazunari Domen, Katsuya Teshima
Perovskite Sr_{1-x}BaxW_{1-y}Tay (O, N)₃: synthesis by thermal ammonolysis and photocatalytic oxygen evolution under visible light. *Mater. Renew. Sustain. Energy*, 6, 10, 1-11, 2017.
- Dae-wook Kim, Hiromasa Shiiba, Nobuyuki Zettsu, Tetsuya Yamada, Takeshi Kimijima, Ryo Ishikawa, Yuichi Ikuhara, Katsuya Teshima
Full picture discovery for mixed-fluorine anion effects on high-voltage spinel manganese cathodes. *NPG Asia Materials*, 9, e398, 1-10, 2017.
- Hiromasa Nishikiori, Shunpei Fujiwara, Shuhei Miyagawa, Nobuyuki Zettsu, Katsuya Teshima
Crystal growth of titania by photocatalytic reaction. *Appl. Catal. B - Environ.*, 217, 241-246, 2017.
- Kenta Kawashima, Mirabbos Hojamberdiev, Oluwanivi Mabyyoje, Bryan R. Wygant, Kunio Yubuta, C. Nuddle Mullins, Kazunari Domen, Katsuya Teshima
NH₃-assisted chloride flux-coating method for direct fabrication of visible-light-responsive SrNbO₂N crystal layers on niobium substrates. *CrystEngComm*, 19, 37, 5532-5541, 2017.
- Kei Nishikawa, Nobuyuki Zettsu, Katsuya Teshima, Kiyoshi Kanamura

- Intrinsic electrochemical characteristics of one $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ spinel particle. *J. Electroanal. Chem.*, 799, 468-472, 2017.
- Mirabbos Hojamberdiev, Maged F. Bekheet, Judy N. Hart, Junie Jhon M. Vequizo, Akira Yamakata, Kunio Yubuta, Aleksander Gurlo, Masashi Hasegawa, Kazunari Domen, Katsuya Teshima
Elucidating the impact of A-site cation change on photocatalytic H_2 and O_2 evolution activities of perovskite-type LnTaON_2 ($\text{Ln}=\text{La}$ and Pr). *Physi. Chem. Chem. Phys.*, 19, 33, 22210-22220, 2017.
- Junie Jhon Vequizo, Mirabbos Hojamberdiev, Katsuya Teshima, Akira Yamakata
Role of CoO_x cocatalyst on Ta_3N_5 photocatalysts studied by transient visible to mid-infrared absorption spectroscopy. *J. Photochem. Photobiol. A Chem.*, 358, 315-319, 2017.
- Kenta Kawashima, Mirabbos Hojamberdiev, Kunio Yubuta, Kazunari Domen, Katsuya Teshima
Synthesis and visible-light-induced sacrificial photocatalytic water oxidation of quinary oxynitride $\text{BaNb}_{0.5}\text{Ta}_{0.5}\text{O}_2\text{N}$ crystals. *J. Energy Chemistry*, Accepted, 2017.
- Mirabbos Hojamberdiev, Kenta Kawashima, Mahesh Kumar, Akira Yamakata, Kunio Yubuta, Aleksander Gurlo, Masashi Hasegawa, Kazunari Domen, Katsuya Teshima
Engaging the flux-grown $\text{La}_{1-x}\text{Sr}_x\text{Fe}_{1-y}\text{Ti}_y\text{O}_3$ crystals in visible-light-driven photocatalytic hydrogen generation. *Int. J. Hydrogen Energy*, 42, 44, 27024-27033, 2017.
- Dae-wook Kim, Nobuyuki Zettsu, Katsuya Teshima
Three-dimensional electric micro-grid network for high-energy-density lithium ion battery cathodes. *J. Mater. Chem. A*, 5, 43, 22797-22804, 2017.
- Tomohito Sudare, Daiki Kawaura, Kunio Yubuta, Katsuya Teshima
Growth of $\{100\}$ -faced NaFeTiO_4 crystals with tunable aspect ratio from a NaCl - Na_2SO_4 binary flux. *CrystrEngComm*, 20, 7, 873-878, 2018.
- Nobuyuki Zettsu, Hiromasa Shiiba, Hitoshi Onodera, Kazune Nemoto, Takeshi Kimijima, Kunio Yubuta, Masanobu Nakayama, Katsuya Teshima
Thin and dense solid-solid heterojunction formation promoted by crystal growth in flux on a substrate. *Sci. Rep.*, 8, 96, 1-11, 2018.
- Tetsuya Yamada, Yukinori Murata, Sayaka Suzuki, Hajime Wagata, Shuji Oishi, Katsuya Teshima
Template-assisted size control of polycrystalline BaNbO_2N particles and effects of their characteristics on photocatalytic water oxidation performances. *J. Phys. Chem. C*, 122, 15, 8037-8044, 2018.
- Kenta Kawashima, Mirabbos Hojamberdiev, Shanshan Chen, Kunio Yubuta, Hajime Wagata, Kazunari Domen, Katsuya Teshima
Understanding the effect of partial N^{3-} -to- O^{2-} substitution and H^+ -to- K^+ exchange on photocatalytic water reduction activity of Ruddlesden-Popper layered perovskite KLaTiO_4 . *MOLECULAR CATALYSIS*, 432, 250-258, DOI: 10.1016/j.mcat.2017.01.004, 2017.
- Hiromasa Nishikiori, Naoyuki Furuichi, Katsuya Teshima, Hiromi Yamashita
Reaction kinetics on allophane-titania nanocomposite electrodes for photofuel cells. *CHEMISTRY LETTERS*, 46, 5, 659-661, DOI: 10.1246/cl.170064, 2017.
- Hiromasa Nishikiori, Shingo Matsunaga, Naoyuki Furuichi, Hitoshi Takayama, Koji Morita, Katsuya Teshima, Hiromi Yamashita
Influence of allophane distribution on photocatalytic activity of allophane-titania composite films. *Appl. Clay Sci.*, 146, 43-49, 2017.
- 錦織広昌, 中村祐介, 松倉 実, 三林正幸
粘土鉱物アロフェンを用いたアセトアルデヒドの分解. *環境化学*, 27, 4, 121-127, 2017.
- 大石修治, 鈴木清香, 手嶋勝弥

初心者のためのルビーコーティング実験. 長野県南信工科短期大学校紀要, 1, 1, 1-5, 2017.

- Hiroyuki Suga, Yohei Hashimoto, Yasunori Toda, Kazuaki Fukushima, Hiroyoshi Esaki, Ayaka Kikuchi
Amine-urea-mediated asymmetric cycloadditions between nitrile oxides and *o*-hydroxystyrenes by dual activation. *Angew. Chem. Int. Ed.*, 56, 39, 11936-11939, 2017.
- Yasunori Toda, Tomoyuki Sakamoto, Yutaka Komiyama, Ayaka Kikuchi, Hiroyuki Suga
A phosphonium ylide as an ionic nucleophilic catalyst for primary hydroxyl group selective acylation of diols. *ACS Catal.*, 7, 9, 6150-6154, 2017.
- Yasunori Toda, Shuto Gomyou, Shoya Tanaka, Yutaka Komiyama, Ayaka Kikuchi, Hiroyuki Suga
Tetraarylphosphonium salt-catalyzed synthesis of oxazolidinones from isocyanates and epoxides. *Org. Lett.*, 19, 21, 5786-5789, 2017.
- Hiroyuki Suga, Taichi Iwai, Masahiro Shimizu, Kie Takahashi, Yasunori Toda
Efficient generation of an oxidopyrylium ylide using a Pd catalyst and its [5+2] cycloadditions with several dipolarophiles. *Chem. Commun.*, 54, 9, 1109-1112, 2018.
- Bo-Kyung Kim, Gyeong-Hyeon Gwak, Tomohiko Okada, Jae-Min Oh
Effect of particle size and local disorder on specific surface area of layered double hydroxides upon calcination-reconstruction. *J. Solid State Chem.*, 263, 60-64, 2018.
- Mutsumi Hirose, Fuyuki Ito, Tetsuya Shimada, Shinsuke Takagi, Ryo Sasai, Tomohiko Okada
Photoluminescence by intercalation of a fluorescent β -diketone dye into a layered silicate. *Langmuir*, 33, 47, 13515-13521, 2017.
- Tomohiko Okada, Takumi Yoshida, Taku Iiyama
Kinetics of interlayer expansion of a layered silicate driven by caffeine intercalation in the water phase using transmission X-ray diffraction. *J. Phys. Chem. B*, 121, 28, 6919-6925, 2017.
- Toshio Sakai, Yasuharu Nakagawa, Kousuke Iijima
Hexadecane-in-water emulsions as thermal-energy storage and heat transfer fluids: Connections between phase-transition temperature and period of hexadecane droplets dispersed in hexadecane-in-water emulsions and characteristics of surfactants. *Colloids Surf. A*, 529, 394-402, 2017.
- 酒井俊郎, 稲場大介, 高橋 望, 海津一宏
乳化剤フリー水中油滴型 (O/W) エマルションの分散安定性: 水溶性物質の影響. 色材協会誌, 90, 11, 1-8, 2017.
- Yuji Ono, Ryusuke Futamura, Yoshiyuki Hattori, Shigenori Utsumi, Toshio Sakai, Katsumi Kaneko
Isotope effect on water adsorption on hydrophobic carbons of different nanoporosities. *CARBON*, 119, 251-256, DOI: 10.1016/j.carbon.2017.04.047, 2017.
- Elda-Zoraida Pina-Salazar, Koki Urita, Takuya Hayashi, Ryusuke Futamura, Fernando Vallejos-Burgos, Jerzy Wloch, Piotr Kowalczyk, Marek Wisniewski, Toshio Sakai, Isamu Moriguchi, Artur P. Terzyk, Eiji Osawa, Katsumi Kaneko
Water adsorption property of hierarchically nanoporous detonation nanodiamonds. *LANGMUIR*, 33, 42, 11180-11188, DOI: 10.1021/acs.langmuir.7b02046, 2017.
- Fumiya Sugimura, Nanami Sakai, Tetsuya Nakamura, Masashi Nakamura, Katsuyoshi Ikeda, Toshio Sakai, Nagahiro Hoshi
Y & IT in situ observation of Pt oxides on the low index planes of Pt using surface enhanced Raman spectroscopy. *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*, 19, 40, 27570-27579, DOI: 10.1039/c7cp04277a, 2017.
- Yuji Ono, Ryusuke Futamura, Yoshiyuki Hattori, Toshio Sakai, Katsumi Kaneko
Adsorption-desorption mediated separation of low concentrated D2O from water with hydrophobic activated

carbon fiber. JOURNAL OF COLLOID AND INTERFACE SCIENCE, 508, 14-17, DOI: 10.1016/j.jcis.2017.08.016, 2017.

Hurul Chotimah, Austina D. Putri, Yuji Ono, Sagisawa Kento, Yoshiyuki Hattori, Shuwen Wang, Ryusuke Futamura, Koki Urita, Fernando Vallejos-Burgos, Isamu Moriguchi, Masafumi Morimoto, Richard T. Cimino, Alexander V. Neimark, Toshio Sakai, Katsumi Kaneko

Nanoporosity change on elastic relaxation of partially folded graphene monoliths. LANGMUIR, 33, 51, 14565-14570, DOI: 10.1021/acs.langmuir.7b03328, 2017.

Yosuke Goto, Tsutomu Minegishi, Yosuke Kageshima, Tomohiro Higashi, Hiroyuki Kaneko, Yongbo Kuang, Mamiko Nakabayashi, Naoya Shibata, Hitoshi Ishihara, Toshio Hayashi, Akihiko Kudo, Taro Yamada, Kazunari Domen

A Particulate (ZnSe)_{0.85}(CuIn_{0.7}Ga_{0.3}Se₂)_{0.15} photocathode modified with CdS and ZnS for sunlight-driven overall water splitting. J. Mater. Chem. A, 5, 40, 21242-21248, 2017.

Jin Su, Tsutomu Minegishi, Yosuke Kageshima, Hiroyuki Kobayashi, Takashi Hisatomi, Tomohiro Higashi, Masao Katayama, Kazunari Domen

CdTe-based photoanode for oxygen evolution from water under simulated sunlight. J. Phys. Chem. Lett., 8, 23, 5712-5717, 2017.

Miao Zhong, Takashi Hisatomi, Yutaka Sasaki, Sayaka Suzuki, Katsuya Teshima, Mamiko Nakabayashi, Naoya Shibata, Hiroshi Nishiyama, Masao Katayama, Taro Yamada, Kazunari Domen

Highly active GaN-stabilized Ta₃N₅ thin-film photoanode for solar water oxidation. Angew. Chem. Int. Ed., 56, 17, 4739-4743, 2017

電子情報システム工学科

Eiji Itoh, Zihan Yuan

Comparative study of all-printed polyimide humidity sensors with single- and multiwalled carbon nanotube gas-permeable top electrodes. Japanese Journal of Applied Physics, 56, 5, 2, 05EC03, 2017.

Naoya Chosei, Eiji Itoh

Estimation of carrier mobility and charge behaviors of organic semiconductor films in metal-insulator-semiconductor diodes consisting of highk oxide/organic semiconductor double layers. Japanese Journal of Applied Physics, 57, 2, SI, 2, 02CA05, 2018.

Eiji Itoh, Shota Sakai, Katsutoshi Fukuda

Inverted bulk-heterojunction organic solar cells with the transfer-printed anodes and low-temperature-processed ultrathin buffer layers. Japanese Journal of Applied Physics, 57, 3, 2, 03EJ07, 2018.

吉作祥明, 加藤貴規, 渡邊悠生, 曾根原 誠, 中山英俊, 後藤洸亮, 佐藤敏郎

MIMキャパシタと結合インダクタを用いたUHF帯薄膜コモンモードフィルタの開発. 電気学会論文誌A, 137, 4, 221-228, 2017.

宮本光教, 久保利哉, 花田貴拓, 井原敬人, 佐藤敏郎, 曾根原 誠

誘導透過干渉フィルタの導入によるFe, Co超薄膜のファラデー効果性能指数の改善効果に関する基礎検討. Transactions on Magnetics Society of Japan (Special Issues), 1, 14-19, 2017.

曾根原 誠, 宮嶋優希, 佐藤敏郎

高Q-RFインダクタ用表面酸化膜付CIP/Epoxy複合材料磁心の基礎検討. Transactions on Magnetics Society of Japan (Special Issues), 1, 34-39, 2017.

佐藤紘介, 杉村佳奈子, 佐藤敏郎, 曾根原 誠, 竹内英樹

表面酸化カルボニル鉄粉メタルコンポジット磁心トランスの試作とフライバックコンバータへの応用. Transac-

- tions on Magnetics Society of Japan (Special Issues), 1, 44-52, 2017.
- 原田公樹, 大平祐介, 吉田栄吉, 佐藤敏郎
疑似分布定数型ラインフィルタにおける減衰帯域幅の高周波化. 電気学会論文誌A (基礎・材料・共通部門誌), 研究開発レター, 137, 9, 547-548, 2017.
- Makoto Sonehara, Yuki Watanabe, Sota Yamaguchi, Takanori Kato, Yasuaki Yoshisaku, Toshiro Sato, Eiji Itoh
Fabrication and evaluation of dispersed-Ag nanoparticles-in-polyimide thin films. Japanese Journal of Applied Physics, 56, 10, S, 10PB05, 4pages, 2017.
- Kanako Sugimura, Daisuke Shibamoto, Naoki Yabu, Tatsuya Yamamoto, Makoto Sonehara, Toshiro Sato, Tsutomu Mizuno, Hideaki Mizusaki
Surface-oxidized amorphous alloy powder/epoxy-resin composite bulk magnetic core and its application to megahertz switching LLC resonant converter. IEEE Transactions on Magnetics, 53, 11, 2801406, 6pages, 2017.
- Makoto Sonehara, Sota Yamaguchi, Yuki Miyajima, Toshiro Sato, Takeshi Inomata, Yuji Ono
Characterization of UHF band LC filter with RF spiral inductor using carbonyl-iron powder/epoxy composite magnetic and chip capacitor. IEEE Transactions on Magnetics, 53, 11, 4002905, 5pages, 2017.
- Kosuke Sato, Toshiro Sato, Makoto Sonehara, Hideki Takeuchi
Low permeability composite magnetic core transformer with high coupling coefficient and its application to PFM controlled quasi-resonant mode flyback-type DC-DC converter. Journal of the Magnetics Society of Japan, 41, 6, 132-139, 2017.
- Takaharu Uekura, Kousuke Oyanagi, Makoto Sonehara, Toshiro Sato, Kousuke Miyaji
Pseudo-differential CMOS analog front-end circuit for wide-bandwidth optical probe current sensor. Japanese Journal of Applied Physics, 57, 4, SI, 04FF06, 6pages, 2018.
- Satoshi Mori, Takeshi Mitsuoka, Kanako Sugimura, Ryosuke Hirayama, Makoto Sonehara, Toshiro Sato, Nobuhiro Matsushita
Core-shell structured Mn-Zn-Fe ferrite/Fe-Si-Cr particles for magnetic composite cores with low loss. Advanced Powder Technology, 29, 6, 1481-1486, 2018.
- Miyako Sagawa, Hernan Aguirre, Fabio Daolio, Arnaud Liefoghe, Bilel Derbel, Sebastien Verel, Kiyoshi Tanaka
A Machine-learning approach to select important variables for recombination on many-objective evolutionary optimization. International Journal of Smart Computing and Artificial Intelligence, 2, 1, 59-78, 2018.
- Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jiajitsawat, Hernan Aguirre, Kiyoshi Tanaka
A Small-scale solar organic rankine cycle power plant in thailand: three types of non-concentrating solar collectors. Solar Energy, 162C, 541-560, 2018.
- Rolando Armas, Hernan Aguirre, Fabio Daolio, Kiyoshi Tanaka
Evolutionary design optimization of traffic signals applied to quito city. PLoS ONE, 12, 12, 37pages, 2017.
- Fabio Daolio, Arnaud Liefoghe, Sébastien Vérel, Hernán E. Aguirre, Kiyoshi Tanaka
Problem features versus algorithm performance on rugged multiobjective combinatorial fitness landscapes. Evolutionary Computation, 28, 4, 555-585, 2017.
- Jaime Sandoval, Kazuma Uenishi, Munetoshi Iwakiri, Kiyoshi Tanaka
Robust 3D planes detection under noisy conditions using scaled difference of normals. IEEEJ Transactions on Image Electronics and Visual Computing, 5, 2, 60-73, 2017.
- Miyako Sagawa, Natsuki Kusuno, Hernan Aguirre, Kiyoshi Tanaka, Masataka Koishi
Evolutionary multi-objective optimization including practically desirable solutions. Advances in Operations Research, 2017, Article ID 9094514, 16pages, 2017.

- Yoshiki Tanaka, Sho Yokoyama, Rie Horai, Takashi Kojima, Sato Hiroyuki, Yukihito Kato, Mari Takagi, Hideki Nakamura, Kiyoshi Tanaka, Kazuo Ichikawa, Shoko Tanabe
Effect of background luminance level on the assessment of color visual acuity using colored landolt rings in young healthy subjects. *Current Eye Research*, 43, 3, 428-434, DOI:10.1080/02713683.2017.1405043, 2017.
- Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jijitsawat, Hernan Aguirre, Kiyoshi Tanaka
Analysis of low-heat upgrading technologies for Organic Rankine Cycle power generation. *NU International Journal of Science*, 14, 2, 43-57, 2017.
- Wei Ren Tan, Chee Seng Chan, Hernán E. Aguirre, Kiyoshi Tanaka
Fuzzy Qualitative Deep Compression Network. *Neurocomputing*, Elsevier, 251, 1-15, 2017.
- Tze Wei Yeoh, Fabio Daolio, Hernán E. Aguirre, Kiyoshi Tanaka
On the Effectiveness of Feature Selection Methods for Gait Classification under Different Covariate Factors. *Journal of Applied Soft Computing*, Elsevier, 61, 42-57, 2017.
- Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jijitsawat, Hernan Aguirre, Kiyoshi Tanaka
VCHP-ORC power generation from low-grade industrial waste heat combined with solar water heating system: Power generation and CO2 emission in industrial estate of Thailand. *Cogent Engineering*, 4, 1-24, 2017.
- 植西一馬, サンドバルハイメ, 岩切宗利, 田中 清
VKOP:3次元幾何構造に適した仮想特徴点検出器及びその特徴記述子. *画像電子学会誌*, 46, 2, 283-297, 2017.
- 松原洋一, 白井啓一郎, 田中 清
ポアソン分布に基づく輝度偏差を用いた適用的合焦評価によるDepth from Focus法. *画像電子学会誌*, 46, 2, 273-282, 2017.
- Rohit Singh, Md Arif Khan, Pankaj Sharma, Myo Than Htay, Abhinav Krant, Shaibal Mukherjee
Two dimensional electron gases in MgZnO/ZnO and ZnO/MgZnO/ZnO heterostructures grown by dual ion beam sputtering. *Journal of Physics D: Applied Physics*, 51:13LT02, 2018.
- Mangal Das, Amitesh Kumar, Rohit Singh, Myo Than Htay, Shaibal Mukherjee
Realization of Synaptic Learning and Memory Functions in Y2O3 based Memristive Device Fabricated by Dual Ion Beam Sputtering. *Nanotechnology*, 29, 5, 055203, 2018.
- Amitesh Kumar, Mangal Das, Vivek Garg, Brajendra Singh Sengar, Myo Than Htay, Shailendra Kumar, Abhinav Kranti, Shaibal Mukherjee
Forming-free high-endurance Al/ZnO/Al memristor fabricated by dual ion beam sputtering. *Appl. Phys. Lett.*, 110, 25, 253509, 2017.
- Osamu Takyu, Shohei Fujii, Youhei Akimoto, Mai Ohta, Takeo Fujii, Fumihito Sasamori, Shiro Handa
Optimal cluster head selection and rotation of cognitive wireless sensor networks for simultaneous data gathering and long life system. *International Journal of Distributed Sensor Networks*, 13, 12, 13pages, 2017.
- 征矢隼人, 田久 修, 白井啓一郎, 太田真衣, 藤井威生, 笹森文仁, 半田志郎
コグニティブ無線における低複雑かつ高精度な占有率と遷移率測定法. *電子情報通信学会和文論文誌B*, J101-B, 2, 133-145, 2018.
- Tatsuya Yamamoto, Yinggang Bu, Tsutomu Mizuno, Yutaka Yamaguchi, Tomoyoshi Kano
Loss reduction of transformer for LLC resonant converter using a magnetoplated wire. *IEEJ Journal of Industry Applications*, 7, 1, 43-48, 2018.
- 大長洋介, 川島康裕, 卜 穎剛, 水野 勉, 森川亮祐
磁界共振結合形40W非接触給電システムの検討. *日本AEM学会誌*, 26, 1, 115-120, 2018.
- 櫻 隼樹, 森 大輝, 卜 穎剛, 水野 勉, 榎木茂美, 旭 尊史
ショート形三角形コイルの高周波駆動による渦電流形レール変位センサの高リフトオフ化. *日本AEM学会誌*, 26, 1, 121-126, 2018.

- 三浦大知, 河合亮典, 卜 穎剛, 水野 勉, 丸山利喜, 寺島智樹
リニア直流モータの可動子のピッチングの影響を受けない変位センサ位置の検討. 日本AEM学会誌, 26, 1, 133-138, 2018.
- Yinggang Bu, Subhas Chandra Mukhopadhyay
Equalization method of the wireless power transfer in an electronic shelf label power supply system. IEEE Transactions on Magnetics, 53, 11, 8401205, 2017.
- Yasuyuki Konno, Tatsuya Yamamoto, Yuki Chai, Dobashi Tomoya, Yinggang Bu, Tsutomu Mizuno
Basic characterization of magnetocoated wire fabricated using spray method. IEEE Transactions on Magnetics, 53, 11, 8401707, 2017.
- 中山徳人, 卜 穎剛, 水野 勉
非接触給電機構および誘導機構を有する消化管用体内ロボットの検討. 日本AEM学会誌, 25, 3, 332-337, 2017.
- 森 大輝, 櫻 隼樹, 卜 穎剛, 水野 勉, 榎木茂実, 旭 尊史
電界シールドを実装したオープン形レール変位センサのレール変位検出. 日本AEM学会誌, 25, 2, 212-217, 2017.
- N. A. b. Mohd Nasir, F. Azhar bin Abdul Shukor, R. Nor Firdaus, H. Wakiwaka, K. Tashiro, M. Nirei
Design of the permanent magnet linear synchronous motor for high thrust and low cogging force performance. Progress in Electromagnetics Research M, 63, 83-92, 2018.
- 田代晋久, 朽名周平, 脇若弘之, 大宮直木
カプセル内視鏡の磁気誘導に向けた磁気誘導用磁石の設計. 日本AEM学会誌, 25, 2, 100-105, 2017.
- 山下貴紀, 田代晋久, 脇若弘之
耐磁性評価用一様磁界発生コイルの設計. 日本AEM学会誌, 26, 1, 127-132, 2018.
- 柏倉英明, 西新幹彦
2変数2次の多項式補間法による秘密分散法のアクセス構造. 電子情報通信学会論文誌A, J100-A, 4, 169-178, 2017.
- Mikihiko Nishiara, Ryo Hidai
Decoding error of sudoku for erasure channels. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, E100A, 12, 2641-2646, 2017.
- Minori Yoshida, Kousuke Miyaji
A 190 mV start-up and 59.2% efficiency CMOS gate boosting voltage doubler charge pump in 0.18 μm standard CMOS process for energy harvesting. Japanese Journal of Applied Physics, 57, 4, SI, 04FF02, 1-7, 2018.
- Takaharu Uekura, Kousuke Oyanagi, Makoto Sonehara, Toshiro Sato, Kousuke Miyaji
Pseudo-differential CMOS analog front-end circuit for wide-bandwidth optical probe current sensor. Japanese Journal of Applied Physics, 57, 4S, 04FF06, 1-6, 2018.
- Noriyuki Urakami, Tetsuya Okuda, Yoshio Hashimoto
Epitaxial growth of ReS₂ (001) thin film via deposited-Re Sulfurization. Japanese Journal of Applied Physics 57, 2, 2, SI, 02CB07, 2018.
- Maito Kosaka, Noriyuki Urakami, Yoshio Hashimoto
Formation of graphitic carbon nitride and boron carbon nitride film on sapphire substrate. Japanese Journal of Applied Physics 57, 2, 2, SI, 02CB09, 2018.
- Yusuke Mitani, Kosuke Miyaji, Satoshi Kaneko, Takaharu Uekura, Hideya Momose, Koh Johguchi
A compact perspiration meter system with capacitive humidity sensor for wearable health-care application. Japanese Journal of Applied Physics, 57, 4, SI, 04FF10, 2018.

- Norihiro Sugita, Makoto Yoshizawa, Makoto Abe, Akira Tanaka, Noriyasu Homma, Tomoyuki Yambe
Contactless technique for measuring blood-pressure variability from one region in video plethysmography. *Journal of Medical and Biological Engineering*, 38, 1-10, 2018.
- Satoshi Harauchi, Kozo Okano, Shinpei Ogata
Removing ambiguous message exchanges in designing sequence diagrams for developing asynchronous communication program. *International Journal of Informatics Society*, 9, 3, 129-138, 2017.
- Chikyu Yanagisawa, Shinpei Ogata, Kozo Okano
On the generation of human-oriented counter-examples using a test automaton. *International Journal of Informatics Society*, 9, 1, 41-50 2017.
- 岡本圭史, 岡野浩三
STAMP海外事例の紹介 : STPA-SafeSec. *SEC journal*, 13, 4, 42-47, 2018.
- Yuichi Futa, Yasunari Shidama
Embedded lattice and properties of gram matrix. *Formalized Mathematics*, 25, 1, 73-86, 2017.
- Yuichi Futa, Yasunari Shidama
Dual lattice of \mathbb{Z} -module lattice. *Formalized Mathematics*, 25, 2, 157-169, 2017.
- Yuichi Futa, Yasunari Shidama
Isomorphism theorem on vector spaces over a ring. *Formalized Mathematics*, 25, 3, 171-178, 2017.
- Keiko Narita, Kazuhisa Nakasho, Yasunari Shidama
F. riesz theorem. *Formalized Mathematics*, 25, 3, 179-184, 2017.
- Kazuhisa Nakasho, Yuichi Futa, Yasunari Shidama
Implicit function theorem, Part I. *Formalized Mathematics*, 25, 4, 269-281, 2017.
- Masaki Onuki, Shunsuke Ono, Keiichiro Shirai, Yuichi Tanaka
Fast singular value shrinkage with Chebyshev polynomial approximation based on signal sparsity. *IEEE Trans. on Signal Process.*, 65, 22, 6083-6096, 2017.
- 松原洋一, 白井啓一郎, 田中 清
ポアソン分布に基づく輝度偏差を用いた適用的合焦評価によるDepth from Focus法. *画像電子学会*, 46, 2, 273-282, 2017.
- T. L. Jin, M. Ranjbar, S. K. He, Wai Chenung Law, T. J. Zhou, Wen Siang Lew, Xiaoxi Liu, S. N. Piramanayagam
Tuning magnetic properties for domain wall pinning via localized metal diffusion. *Scientific Reports*, 7, 1, 16208, 1-9, 2017
- Xichao Zhang, Jing Xia, Yan Zhou, Xiaoxi Liu, Han Zhang, Motohiko Ezawa
Skyrmion dynamics in a frustrated ferromagnetic film and current-induced helicity locking-unlocking transition. *Nature Communications*, 8, 1, 1717, 1-10, 2017
- Jing Xia, Yangqi Huang, Xichao Zhang, Wang Kang, Chentian Zheng, Xiaoxi Liu, Yan Zhou
A microwave field-driven transistor-like skyrmionic device with the microwave current-assisted skyrmion creation. *Journal of Applied Physics*, 122, 15, 153901, 1-9, 2017.
- Akane Agui, Chuang Ma, Xiaoxi Liu, Naruiki Tsuji, Misako Adachi, Akane Shibayama, Kosuke Suzuki, Hiroshi Sakurai
Magnetic Compton profile evaluation of magnetization process of TbxCo100-x films. *Materials Research Express*, 4, 10, 106108, 1-10, 2017.
- Xichao Zhang, Jan Müller, Jing Xia, Markus Garst, Xiaoxi Liu, Yan Zhou
Motion of skyrmions in nanowires driven by magnonic momentum-transfer forces. *New Journal of Physics*, 19, 6, 065001, 1-10, 2017.

Xichao Zhang, Jing Xia, G. P. Zhao, Xiaoxi Liu, Yan Zhou

Magnetic Skyrmion Transport in a Nanotrack With Spatially Varying Damping and Non-adiabatic Torque. *IEEE Transactions on Magnetics*, 53, 3, 2, 1500206, 1-6, 2017.

源野広和, 小林一樹

大量高精細画像からの果実生育情報の抽出. *農業情報研究*, 26, 4, 100-114, 2017.

北川耕平, 香山瑞恵, 橋本昌巳

音読時間とポーズの特徴に着目した読みの流暢性の評価指標に基づく音読の流暢性評価の提案. *電子情報通信学会論文誌D*, J101-D, 2, 338-347, 2018.

香山瑞恵, 箕浦航, 山本翔, 不破泰, 橋本昌巳

情報通信ネットワークにおけるプロトコルの基本概念理解のためのハンズオン教材. *教育システム情報学会論文誌*, 35, 2, 1-12, 2018.

水環境・土木工学科

梅崎健夫, 河村隆

ゼオライトシートを用いた水域浄化フェンスの開発と富栄養化対策への適用. *ジオシンセティックス論文集*, 32, 117-124, 2017.

Koki Kashiwaya, Yuta Muto, Taiki Kubo, Reo Ikawa, Shinji Nakaya, Katsuaki Koike, Atsunao Marui

Spatial variations of tritium concentrations in groundwater collected in the southern coastal region of Fukushima, Japan, after the nuclear accident. *Scientific Reports*, 7, 12578, DOI:10.1038/s41598-017-12840-3, 2017.

Kenji Takeuchi, Yoshihiro Takizawa, Hidenori Kitazawa, Moeka Fujii, Kaoru Hosaka, Josue Oortiz Medina, Aaron Morelos Gomez, Masatsugu Fujishige, Noboru Akuzawa, Morinobu Endo

Salt rejection behavior of carbon nanotube-polyamide nanocomposite reverse osmosis membranes in several salt solutions. *Desalination*, 443, 165-171, 2018.

Josue Oortiz Medina, Sshigeki Inukai, Takumi Araki, Aaron Morelos Gomez, Rodolfo Cruz Silva, Kenji Takeuchi, Toru Noguchi, Takeyuki Kawaguchi, Mauricio Terrones, Morinobu Endo

Robust water desalination membranes against degradation using high loads of carbon nanotubes. *Scientific Reports*, 8, 2748, 2018.

Takumi Araki, Rodolfo Cruz Silva, Syogo Tejima, Josue Oortiz Medina, Aaron Morelos Gomez, Kenji Takeuchi, Takuya Hayashi, Mauricio Terrones, Morinobu Endo

Water diffusion mechanism in carbon nanotube/polyamide nanocomposite reverse osmosis membranes: A possible percolation-hopping mechanism. *Physical Review Applied*, 9, 2, 024018, 2018.

Masatsugu Fujishige, Winnada Wongwiriyapan, Hiroyuki Muramatsu, Kenji Takeuchi, Susumu Arai

Field emission properties of a DWCNT bundle and a single MWCNT. *Journal of Physics and Chemistry of Solids*, 113, 229-234, 2018.

Kenji Takeuchi, Hidenori Kitazawa, Moeka Fujishige, Noboru Akuzawa, Josue Oortiz Medina, Aaron Morelos Gomez, Rodolfo Cruz Silva, Takumi Araki, Takuya Hayashi, Morinobu Endo

Oil removing properties of exfoliated graphite in actual produced water treatment. *Journal of Water Process Engineering*, 20, 226-231, 2017.

Yoshihiro Takizawa, Shigeki Inukai, Takumi Araki, Rodolfo Cruz Silva, Noriko Uemura, Aaron Morelos Gomez, Josue Oortiz Medina, Syogo Tejima, Kenji Takeuchi, Takeyuki Kawaguchi, Toru Noguchi, Takuya Hayashi, Mauricio Terrones, Morinobu Endo

Antiorganic Fouling and Low-Protein Adhesion on Reverse-Osmosis Membranes Made of Carbon Nanotubes and Polyamide Nanocomposite. *ACS Applied Materials & Interfaces*, 9, 37, 32192-32201, 2017.

- Zhipeng Wang, Hironori Ogata, Gan Jet Hong Melvin, Michiko Obata, Shingo Morimoto, Josue Oortiz Medina, Rodolfo Cruz Silva, Masatsugu Fujishige, Kenji Takeuchi, Hiroyuki Muramatsu, Tae Young Kim, Yoong Ahm Kim, Takuya Hayashi, Mauricio Terrones, Yoshio Hashimoto, Morinobu Endo
Structural evolution of hydrothermal carbon spheres induced by high temperatures and their electrical properties under compression. *Carbon*, 121, 426-433, 2017.
- Paweena Dulyaseree, Masatsugu Fujishige, Ichiro Yoshida, Yumiko Toya, Yasuo Banba, Yu-suke Tanaka, Takaaki Aoyama, Mayuree Phonyiem, Winadda Wongwiriyapan, Kenji Takeuchi, Morinobu Endo
Nitrogen-rich green leaves of papaya and *Coccinia grandis* as precursors of activated carbon and their electrochemical properties. *RSC Advances*, 7, 67, 42064-42072, 2017.
- Aaron Morelos-Gomez, Rodolfo Cruz-Silva, Hiroyuki Muramatsu, Josue Ortiz-Medina, Takumi Araki, Tomoyuki Fukuyo, Syogo Tejima, Kenji Takeuchi, Takuya Hayashi, Mauricio Terrones, Morinobu Endo
Effective NaCl and dye rejection of hybrid graphene oxide/graphene layered membranes. *Nature Nanotechnology*, 12, 11, 1083-1088, 2017.
- Yuki Chikahiro, Ichiro Ario, Piotr Pawlowski, Cezary Graczykowski, Masatoshi Nakazawa, Jan Holnicki-Szulc, Syuichi Ono
Dynamics of the scissors-type Mobile Bridge. *Procedia Engineering*, 199, 2919-2924, 2017.
- Zhao Zhang, Baoyin Song, Gang Li, Xi Cao
Effect of dynamic load on water flow boiling CHF in rectangular channels. *Heat and Mass Transfer*, 54, 1593-1601, 2018 (online 2017).

機械システム工学科

- H. Sugioka, H. Dan, Y. Hanazawa
Microcolumn formation due to induced-charge electroosmosis in a floating mode. *J. Phys. Soc. Jpn.*, 86, 10, 104402, 5pages, 2017.
- H. Sugioka, N. Nakano
High-speed broadband elastic actuator in water using induced-charge electro-osmosis with a skew structure. *Physical Review E*, 97, 1, 013105, 7pages, 2018.
- 藤澤彰宏, 千田有一
ハウレンソウ自動収穫装置における土の移動を考慮した根切り刃の経路設計. *日本機械学会論文集*, 83, 850, 1-16 (Paper No. 16-00472), 2017.
- 畠山貴充, 平野幸助, 中村雄太, 藤澤彰宏, 土屋貴司, 山口達也, 千田有一, 吉村達也
高さと角度の2自由度機構を有する軟弱野菜自動収穫装置の制御 (第1報, 根切り刃のアーム長制御). *日本機械学会論文集*, 83, 851, 1-17 (Paper No. 16-00531), 2017.
- 白 涵夫, 吉野正人, 鈴木康祐
埋め込み境界-改良Lattice Kinetic Schemeを用いた三次元T字管内における単一固体粒子の輸送解析. *計算数理工学論文集*, 17, 1-6, 2017.
- 牧野裕樹, 熊野寛之, 浅岡龍徳
分岐管におけるアイススラリーの流動・分配特性. *日本冷凍空調学会論文集*, 34, 2, 127-137, 2017.
- Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jijitsawat, Hernan Aguirre, Kiyoshi Tanaka
VCHP-ORC Power generation from low-grade industrial waste heat combined with solar water heating system: power generation and CO2 emission in industrial estate of Thailand, *Cogent Engineering*, 4, 1359397 (24pages), 2017.
- Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jijitsawat, Hernan Aguirre, Kiyoshi Tanaka

Analysis of low-heat upgrading technologies for organic rankine cycle power generation. *NU. International Journal of Science*, 14, 2, 43-57, 2017.

Tatsunori Asaoka, Koya Ikeda

Observation of the growth characteristics of gas hydrate in the quiescent-type formation method using surfactant. *Journal of Crystal Growth*, 478, 1-8, 2017.

Hiroyuki Kumano, Kiwako Hiroi, Tatsunori Asaoka

Experimental study on flow and heat transfer characteristics of oil/water emulsions: Part II - Heat transfer characteristics, *Applied Thermal Engineering*, 127, 1555-1563, 2017.

Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jiajitsawat, Hernan Aguirre, Kiyoshi Tanaka

A small-scale solar organic rankine cycle power plant in Thailand: three types of non-concentrating solar collectors, *Solar Energy*, 162, 541-560, 2018.

Futoshi Yoshida, Shouichiro Iio, Kenji Ito, Ato Kitagawa

Experimental and theoretical analysis of active charge accumulator for water hydraulics system. *IEEE ACCESS*, 5, 881-890, 2017.

亀山正樹, 笠原尚哉, 石川皓士, 榎原幹十朗

平板の超音速パネルフラッタ振動を利用した圧電振動発電における圧電素子最適配置. *日本航空宇宙学会論文集*, 66, 2, 47-52, 2018.

Satoru Sakai, Masayuki Ando, Shunsuke Kobashi

Visual feedback without geometric features against occlusion: a Walsh basis. *IEEE Transactions on Control Systems Technology*, DOI:10.1109/TCST.2017.2780176, 1-8, 2018.

丸谷俊之, 安宅勝弘, 齋藤憲司, 高山潤也, 佐藤 武, 杉田義郎, 苗村育郎

全国国立大学大学院学生の病死, 事故死の状況について - 13年間の調査より -. *Campus Health*, 54, 2, 217-222, 2017.

Takizawa T, Nakayama N, Haniu H, Aoki K, Okamoto M, Nomura H, Tanaka M, Sobajima A, Yoshida K, Kamanaka T, Ajima K, Oishi A, Kuroda C, Ishida H, Okano S, Kobayashi S, Kato H, Saito N.

Titanium fiber plates for bone tissue repair. *Advanced Materials*, 30, 4, 1703608, 2017.

Keita Goto, Masahiro Arai, Masaomi Nishimura, Kazuki Dohi

Strength evaluation of unidirectional carbon fiber-reinforced plastic laminates based on tension-compression biaxial stress tests. *Advanced Composite Materials*, 27, 4, 413-426, 2018.

Li-Bin Niu, Koji Okano, Sakae Izumi, Kunio Shiokawa, Mitsuo Yamashita, Yoshihiro Sakai

Effect of chloride and sulfate ions on crevice corrosion behavior of low-pressure steam turbine materials. *Corrosion Science*, 132, 284-292, 2018.

Li-Bin Niu, Hisamitsu Ishitake, Sakae Izumi, Kunio Shiokawa, Mitsuo Yamashita, Yoshihiro Sakai

Stress Corrosion Cracking Behavior of Hardening-Treated 13Cr Stainless Steel. *IOP Conference Series: Materials Science and Engineering*, 317, 012073-012073, 2018.

Sango Matsuzaki, Kimitoshi Yamazaki, Yoshitaka Hara, Takashi Tsubouchi

Traversable region estimation for mobile robots in outdoor image. *Journal of Intelligent Robots and Systems*, 1-11, 2018.

Yusuke Moriya, Daisuke Tanaka, Kimitoshi Yamazaki, Keisuke Takeshita

A method of picking up a folded fabric product by a single-armed robot. *ROBOMECH Journal*, 5, 1, 1-12, 2018.

Kimitoshi Yamazaki

A method of classifying crumpled clothing based on image features derived from clothing fabrics and wrinkles. *Autonomous Robots*, 41, 4, 865-879, 2017.

Kosuke Suzuki, Masato Yoshino

Aerodynamic comparison of a butterfly-like flapping wing-body model and a revolving-wing model. *Fluid Dynamics Research*, 49, 3, 035512, 26pages, 2017.

Kosuke Suzuki, Takaaki Aoki, Masato Yoshino

Effect of wing mass in free flight of a two-dimensional symmetric flapping wing-body model. *Fluid Dynamics Research*, 49, 5, 055504, 17pages, 2017.

高橋正幸, 秋本洋平, 藤井雅留太

共分散行列適応進化戦略に基づいた音響クロークのトポロジー最適化. *日本機械学会論文集*, 84, 859, 17-00590, 2018.

Garuda Fujii, Youhei Akimoto, Masayuki Takahashi

Exploring optimal topology of thermal cloaks by CMA-ES. *Applied Physics Letters*, 112, 6, 061108, 2018.

Garuda Fujii, Masayuki Takahashi, Youhei Akimoto

CMA-ES-based structural topology optimization using a level set boundary expression-application to optical and carpet cloaks. *Computer Methods in Applied Mechanics and Engineering*, 332, 624-643, 2018.

建築学科

高橋 葵, 高木直樹

早期段階における温室効果ガス排出量推計に関する研究-長野市, 松本市, 安曇野市を対象とした分析-. *日本建築学会環境系論文集*, 736, 609-616, 2017.

Erika Koshi, Toshikazu Tsuchimoto, Yabin Li

Analyses of buildings with base-to-ridge posts in the northern part of Mesoamerica. *International Journal of Heritage Architecture*, 1, 4, 730-750, 2017.

輿 恵理香, 李 雅濱, 土本俊和

慕婦絵に描かれた釘隠しと舟肘木-絵画的表現と建築構造-. *日本建築学会計画系論文集*, 82, 741, 2949-2959, 2017.

高村秀紀, 吉岡 耕

生産規模の異なる2工場で生産された合板の環境影響の比較. *エネルギー資源学会論文誌*, 38, 6, 1-8, 2017.

藤木菜奈子, 岩井一博, 浅野良晴

災害時に廃棄される家電及び小型家電の処理の実態と対策に関する研究. *日本建築学会技術報告集*, 56, 467-470, 2018.

岩井一博, 浅野良晴, 藤木菜奈子

震災前後の長野県, 山梨県, 新潟県における戸建て住宅のエネルギー消費量と節電実態に関する研究. *日本建築学会環境系論文集*, 83, 743, 87-96, 2018.

松原昂平, 寺内美紀子

「新建築」誌作品解説における類出語の共起ネットワークからみた言語構造. *日本建築学会計画系論文集*, 740, 2577-2585, 2017.

出田麻子, 寺内美紀子

長野市の通学支援制度適用小学校区における通学手段の実態. *日本建築学会技術報告集*, 55, 947-952, 2017.

羽藤広輔

1950年代伝統論争における和風建築批判と反論-吉田五十八の事例に着目して-. *デザイン理論*, 70, 35-48, 2017.

梅干野成央, 蒔田光彦, 石原麻美

長野県大町市平林家住宅の主屋再建(明治23年)に関する史料にみる土蔵造町家の建設組織. *日本建築学会技術*

報告集, 24, 56, 415-420, 2018.

Endo Yohei, Llorens Miquel, Roca Pere, Pelà Luca

Dynamic identification and static loading tests of timber vaults: Application to a Modernist 20th century heritage structure. *International Journal of Architectural Heritage*, 11, 4, 607-620, 2017.

工学基礎部門

Jun Kawabe

The Vitali type theorem for the Choquet integral. *Linear Nonlinear Anal.*, 3, 349-365, 2017.

Jun Kawabe

Convergence theorems of the Choquet integral for three types of convergence of measurable functions. *Josai Math. Monographs*, 11, 55-74, 2018.

Hirofumi Ohno

Unitary equivalence classes of one-dimensional quantum walks II. *Quantum Inf. Process.*, 16, 12, UNSP287, 2017.

Yasumichi Matsuzawa, Hirofumi Ohno, Akito Suzuki, Tatsuya Tsurii, Satoe Yamanaka

Non-commutative hypergroup of order five. *J. Algebra Appl.*, 16, 7, 1750127, 2017.

S. Richard, A. Suzuki, R. Tiedra de Aldecoa

Quantum walks with an anisotropic coin I: spectral theory. *Lett. Math. Phys.* 108, 2, 331-357, 2018.

T. Fuda, D. Funakawa, A. Suzuki

Localization of a multi-dimensional quantum walk with one defect. *Quantum Inf. Process.* 16, 8, 203, 2017.

Piero D'Ancona, Mamoru Okamoto

On the cubic Dirac equation with potential and the Lochak-Majorana condition. *J. Math. Anal. Appl.* 456, 2, 1203-1237, 2017.

Mamoru Okamoto

Large time asymptotics of solutions to the short-pulse equation. *NoDEA Nonlinear Differential Equations Appl.* 24, 4, 42, 2017.

Mamoru Okamoto

Norm inflation for the generalized Boussinesq and Kawahara equations. *Nonlinear Analysis* 157, 44-61, 2017.

Shuji Machihara, Mamoru Okamoto

Well-posedness for the dimension-reduced Chern-Simons-Dirac system. *J. Evol. Equ.* 17, 3, 1031-1048, 2017.

M. Sakamoto, A. Terakado, K. Nojiri, N. Ezumi, Y. Nakashima, K. Sawada, K. Ichimura, M. Fukumoto,

K. Oki, K. Shimizu, N. Ohno, S. Masuzaki, S. Togo, J. Kohagura, M. Yoshikawa

Molecular activated recombination in divertor simulation plasma on GAMMA 10/PDX. *Nuclear Materials and Energy* 12, 1004-1009, 2017.

Kawahara, T. D., S. Nozawa, N. Saito, T. Kawabata, T. T. Tsuda, S. Wada

Sodium temperature/wind lidar based on laser-diode-pumped Nd:YAG lasers deployed at Tromsø, Norway (69.6° N, 19.2° E). *Optics Express*, 25, 12, A491-A501, 2017.

Takahashi, T., K. Hosokawa, S. Nozawa, T. T. Tsuda, Y. Ogawa, M. Tsutsumi, Y. Hiraki, H. Fujiwara,

T. D. Kawahara, N. Saito, S. Wada, T. Kawabata, C. Hall

Depletion of mesospheric sodium during extended period of pulsating aurora. *Journal of Geophysical Research: Space Physics*, 122, 1, 1212-1220, 2017.

Nakade K, Fujimori S, Watanabe T, Murata Y, Terasawa S, Jarpat SM, Adiatmika IPG, Adiputra IN,

Muliarta IM, Terasawa S

A case study of health education from Nagano prefecture in Japan: The relationship between health education and medical expenses. *Journal of Community Medicine & Health Education*, 7, 3, 1-6, 2017.

Akimi Fujita, Mordecai-Mark Mac Low

Cosmic Ray Driven Outflows in an Ultraluminous Galaxy. *Monthly Notices of the Royal Astronomical Society* 477, 1, 531-538, 2018.

特任教授

Y Kikuchi, H Wakiwaka, M Yanagihara

Improvement of thermal radiation characteristic of AC servomotor using Al-CNT composite material, IOP Conference Series, Materials Science and Engineering, 311, conference 1, 311, 012003, 1-7, 2018.

N. A. b. Mohd Nasir, F. Azhar bin Abdul Shukor, R. Nor Firdaus, H. Wakiwaka, K. Tashiro, M. Nirei

Design of the permanent magnet linear synchronous motor for high thrust and low cogging force performance. *Progress in Electromagnetics Research M*, 63, 83-92, 2018.

田代晋久, 朽名周平, 脇若弘之, 大宮直木

カプセル内視鏡の磁気誘導に向けた磁気誘導用磁石の設計. *日本AEM学会誌*. 25, 2, 100-105, 2017.

C. de Tomas, I. Suarez-Martinez, F. Vallejos-Burugos, M. J. Lopez, K. Kaneko, N. A. Marks

Structural prediction of graphitization and porosity in carbide-derived carbons. *Carbon*, 119, 1-9, 2017.

Y. Ono, R. Futamura, Y. Hattori, S. Utsumi, T. Sakai, K. Kaneko

Isotope effect on water adsorption on hydrophobic carbons of different nanoporosity. *Carbon*, 119, 251-256, 2017.

S. Wang, Z. Wang, R. Futamura, M. Endo, K. Kaneko

Highly microporous-graphene aerogel monolith of unidirectional honeycomb macro-textures, *Chem. Phys. Lett.* 673, 38-43, 2017.

J. Włoch, A. P. Terzyk, P. Kowalczyk, E. Korczeniewski, K. Kaneko

Hydrophobicity/Hydrophilicity of a HOPG Surface - Comment on the paper by Y. Wei and C. Q. Jia *Switchable Carbon*, 87 (2015) 10-17, *Carbon*, 115, 571-573, 2017.

Y. Ono, R. Futamura, Y. Hattori, T. Sakai, K. Kaneko

Adsorption-desorption mediated separation of low concentrated D₂O from water with hydrophobic activated carbon fiber. *J. Colloid Interface Sci.* 508, 14-17, 2017.

P. Kowalczyk, J. Miyawaki, Y. Azuma, S.-H. Yoon, K. Nakabayashi, P. A. Gauden, S. Furmaniak,

A. P. Terzyku, M. Winniewski, J. Włoch, K. Kaneko, A. V. Neimark

Molecular simulation aided nanoporous carbon design for highly efficient low-concentrated formaldehyde capture. *Carbon*, 124, 152-160, 2017.

R. Futamura, T. Iiyama, Y. Takasaki, Y. Gogotsi, M. J. Biggs, M. Salanne, J. Ségolini, P. Simon,

K. Kaneko

Partial breaking of the Coulombic ordering of ionic liquids confined in carbon nanopores. *Nature Materials*, 16, 12, 1225-1232, 2017.

Pina-Salazar, K. Urita, T. Hayashi, R. Futamura, F. Vallejos-Burgos, J. Włoch, P. Kowalczyk, M.

Wiśniewski, T. Sakai, I. Moriguchi, A. Terzyk, E. Osawa, K. Kaneko

Water adsorption property of hierarchically nanoporous detonation nanodiamonds. *Langmuir*, 33, 42, 11180-11188, 2017.

N. Chotimah, A. D. Putri, Y. Ono, K. Sagisaka, Y. Hattori, S. Wang, R. Futamura, K. Urita,

- F. Vallejos-Burgos, I. Moriguchi, M. Morimoto, R. T. Cimino, A. V. Neimark, T. Sakai, K. Kaneko
Nanoporosity change on elastic relaxation of partially folded graphene monoliths. *Langmuir*, 33, 51, 14565-14570, 2017.

航空宇宙システム研究センター

Y Kikuchi, H Wakiwaka, M Yanagihara

- Improvement of thermal radiation characteristic of AC servomotor using Al-CNT composite material. *IOP Science (Open access)*, 311, 012003, 7pages, 2018.

信州大学—理化学研究所連携研究室

Guoqing Wang, Yoshitsugu Akiyama, Naoki Kanayama, Tohru Takarada, Mizuo Maeda

- Directed assembly of gold nanorods by terminal-base pairing of surface-grafted DNA. *Small*, 13, 44, 1702137, 2017.

技術部

Masahiro Shimizu, Ryosuke Yatsuzuka, Masaomi Horita, Takahiro Yamamoto, Susumu Arai

- Design of roughened current collector by bottom-up approach using the electroplating technique: charge-discharge performance of a Sn negative-electrode for Na-Ion batteries. *J. Phys. Chem. C*, 121, 49, 27285-27294, 2017.

2. 国際会議プロシーディング

物質化学科

Toshio Sakai, Kosuke Iijima, Kei Suzuki

- Organogel-in-water emulsions as thermal-energy storage and heat transfer fluids. *Proceedings of the 90th JSCM Anniversary Conference*, *J. Jpn. Soc. Colour. Mater.*, 91, 3, 85-88, 2018.

電子情報システム工学科

Kosuke Sato, Toshiro Sato, Makoto Sonehara

- Transient response improvement of digitally controlled DC-DC converter with feedforward compensator. *Proc. of the IEEE International Telecommunications Energy Conference (INTELEC2017)*, 609-614, 2017.

Wei Ren Tan, Chee Seng Chan, Hernan Aguirre, Kiyoshi Tanaka

- ArtGAN: Artwork synthesis with conditional categorial GANs. *Proc. IEEE International Conference on Image Processing (ICIP2017)*, CD-ROM, 6pages, 2017.

Tze Wei Yeoh, Hernan E. Aguirre, Kiyoshi Tanaka

- Stacked progressive auto-encoders for clothing-invariant gait recognition. *Proc. of International Conference on Computer Analysis of Images and Patterns (CAIP2017)*, 151-161, 2017.

Sorawit Sonsaree, Tatsunori Asaoka, Somchai Jiajitsawat, Hernan Aguirre, Kiyoshi Tanaka