Published Papers by IROAST Researchers

Kei Toda

K. Saeki, K. Ikari, Y. Kazuya, H. Yokoi, S. Ohira, H. Okochi, K. Toda, "Biogenic Diamines and Their Amide Derivatives Are Present in the Forest Atmosphere and May Play a Role in Particle Formation," ACS Earth and Space Chemistry, 6, 421–430, 2022.

M. Takeuchi, N. Tomiyasu, M. Namikawa, H. Tanaka, K. Toda, N. Katsumi, H. Okochi, "On-line analysis of free-tropospheric water-soluble acidic gases and particulate anions on the summit of Mt. Fuji, Japan," Atmospheric Environment, 273, 118977, 2022.

Dmitri Aleks Molodov

L.A. Barrales-Mora, Y. Tokuda, D.A. Molodov, S. Tsurekawa, "On incipient plasticity in the vicinity of grain boundaries in aluminum bicrystals: Experimental and simulation nanoindentation study," Materials Science and Engineering: A, 828, 142100, 2021.

J.E. Brandenburg, J. Seo, K. Eto, D.A. Molodov, S. Tsurekawa, "Influence of symmetrical <10$\bar{1}$0> high-angle tilt grain boundaries on the local mechanical properties of magnesium bicrystals," Materials Science and Engineering: A, 826, 141913, 2021.

László Pusztai

Temleitner, L., Pusztai, L., Cuello, G., Stunault, A., "Structural studies of ^{1}H-containing liquids by polarized neutrons: Chemical environment and wavelength dependence of the incoherent background," J. Mol. Liq., 350, 118535, 2022.

Pethes, I., Pusztai, L., Ohara, K., Temleitner, L., "Temperature-dependent structure of 1-propanol/water mixtures: X-ray diffraction experiments and computer simulations at low and high alcohol contents," J. Mol. Liq., 340, 117188, 2021.

Pothoczki, S, Pethes, I, Pusztai, L, Temleitner, L, Ohara, K, Bakó, I, "Properties of Hydrogen-Bonded Networks in Ethanol–Water Liquid Mixtures as a Function of Temperature: Diffraction Experiments and Computer Simulations," The Journal of Physical Chemistry B, 125(23), 6272-6279, 2021.

Yufeng Zheng

Kun Wang, Guo Bao, Qianqian Fan, Liquan Zhu, Lijun Yang, Tingting Liu, Zechuan Zhang, Guannan Li, Xihua Chen, Xiangbo Xu, Xiaoxue Xu, Bin He, Yufeng Zheng, "Feasibility evaluation of a Cu-38 Zn alloy for intrauterine devices: In vitro and in vivo studies," Acta Biomaterialia, 138, 561-575, 2022.

Xinhua Qu, Hongtao Yang, Bo Jia, Minqi Wang, Bing Yue, Yufeng Zheng*, Kerong Dai*, "Zinc alloy-based bone internal fixation screw with antibacterial and anti-osteolytic properties," Bioactive Materials, 6, 12, 4607-4624, 2021. (*corresponding author)

Hongtao Yang, Xinhua Qu, Minqi Wang, Houwen Cheng, Bo Jia, Jianfeng, Nie, Kerong Dai, Yufeng Zheng, "Zn-0.4Li alloy shows great potential for the fixation and healing of bone fractures at load-bearing sites," Chemical Engineering Journal, 417, 129317, 2021.

Mitsuhiro Aida

Yamada M, Tanaka S, Miyazaki T, Aida M., "Expression of the auxin biosynthetic genes YUCCA1 and YUCCA4 is dependent on the boundary regulators CUP-SHAPED COTYLEDON genes in the Arabidopsis thaliana embryo," Plant Biotechnol, 39, 37-42, 2022

Suzuki, R., Yamada, M., Higaki, T., Aida M., Kubo, M., Tsai, A.Y-L., Sawa, S., "PUCHI regulates giant cell morphology formation during root-knot nematode infection in Arabidopsis thaliana," Frontiers in Plant Science, 12, 755610, 2021.

Ikeda Y, Králová M, Zalabák D, Kubalová I, Aida M., "Post-embryonic lateral organ development and adaxial–abaxial polarity are regulated by the combined effect of ENHANCER OF SHOOT REGENERATION 1 and WUSCHEL in Arabidopsis shoots," Int. J. Mol Sci, 22, 10621, 2021.

Takahama A, Aida M., "Visualization and quantification of cortical microtubules in the apical region of the Arabidopsis thaliana embryo," Cytologia, 86, 181-182, 2021.

Fujihara R, Uchida N, Tameshige T, Kawamoto N, Hotokezaka Y, Higaki T, Simon R, Torii KU, Tasaka M, Aida M., "The boundary-expressed EPIDERMAL PATTERNING FACTOR-LIKE2 gene encoding a signaling peptide promotes cotyledon growth during Arabidopsis thaliana embryogenesis," Plant Biotechnol, 38, 317-322, 2021.

Yamamoto K, Tasaka M, *Aida M., "Genetic interactions between the CUP-SHAPED COTYLEDON and the BELLRINGER genes indicate their overlapping functions in carpel boundary development in Arabidopsis thaliana," Plant Morphol, 33 (1), 95-100, 2021.

Takumi Higaki

Suzuki R, Yamada M, Higaki T, Aida M, Kubo M, Tsai AY, Sawa S, "PUCHI regulates giant cell morphology during root-knot nematode infection in Arabidopsis thaliana," Front Plant Sci, 12, 755610, 2021.

Kikukawa K, Sato R, Iwamoto M, Higaki T, "Wide-range segmentation of cotyledon epidermal cells for morphometrical analysis and mechanical simulation," Cytologia, 86, 189-194, 2021.

Kikukawa K, Yoshimura K, Watanabe A, Higaki T, "Metal-nano-ink coating for monitoring and quantification of cotyledon epidermal cell morphogenesis," Front Plant Sci, 12, 745980, 2021.

Kamon E, Noda C, Higaki T, Demura T, Ohtani M, "Calcium signaling contributes to xylem vessel cell differentiation via post-transcriptional regulation of VND7 downstream events," Plant Biotech, 38, 331-337, 2021.

Fujihara R, Uchida N, Tameshige T, Kawamoto N, Hotokezaka Y, Higaki T, Simon R, Torii KU, Tasaka M, Aida M, "The boundary-expressed EPIDERMAL PATTERNING FACTOR-LIKE2 gene encoding a signaling peptide promotes cotyledon growth during Arabidopsis thaliana embryogenesis," Plant Biotech, 38, 317-322, 2021.

Sato F, Iba K, Higaki T, "Involvement of the membrane trafficking factor PATROL1 in the salinity stress tolerance of Arabidopsis thaliana," Cytologia, 86, 119-126, 2021.

Higaki T, Sato F, Iba K, "Environmental responses of the membrane trafficking factor PATROL1 in the Arabidopsis stomatal complex," Cytologia, 86, 101-102, 2021.

Kimura T, Haga K, Nomura Y, Higaki T, Nakagami H, Sakai T, "Phosphorylation of NONPHOTOTROPIC HYPOCOTYL3 affects photosensory adaptation during the phototropic response," Plant Physiol, 187, 981–995, 2021.

Matsumoto H, Kimata Y, Higaki T, Higashiyama T, Ueda M, "Dynamic rearrangement and directional migration of tubular vacuoles are required for the asymmetric division of the Arabidopsis zygote," Plant Cell Physiol, 62, 1280-1289 2021.

Kunita I, Morita MT, Toda M, Higaki T, "A three-dimensional scanning system for digital archiving and quantitative evaluation of Arabidopsis plant architectures," Plant Cell Physiol, 62, 1975-1982, 2021.

Ruda Lee

Chinmaya Mahapatra, Ruda Lee, Manash K. Paul, "Emerging role and promise of nanomaterials in organoid research," Drug Discovery Today, 27, 890-899, 2022.

Kang Pa Lee, Suji Baek, Myeong Sik Yoon, Ji Soo Park, Bok Sil Hong, Sang Ju Lee, Seung Jun Oh, Seung Hae Kwon, Ruda Lee, Dae Ho Lee, Kang-Seo Park, Byung Seok Moon, "Potential anticancer effect of aspirin and 2'-hydroxy-2,3,5'-trimethoxychalcone-linked polymeric micelles against cervical cancer through apoptosis," Oncology Letters, 23, 31, 2021.

Sajid Fazal, Ruda Lee*, "Biomimetic Bacterial Membrane Vesicles for Drug Delivery," Applications. Pharmaceutics, 13, 1430, 2021.

Hiroki Matsuo

Yuji Noguchi*, Hiroki Matsuo* "Polarizaion and Dielectric Properties of $BiFeO_3$-$BaTiO_3$ Superlattice-Structured Ferroelectric Films," Nanomaterials, 11, 1857, 2021.

Atsushi Sainoki

Schwartzkopff, A.K., Sainoki, A., Elsworth, D., "Numerical simulation of mixed aseismic/seismic fault-slip induced by fluid injection using coupled X-FEM analysis," International Journal of Rock Mechanics and Mining Sciences, 147, 104871, 2021.

Amagu, Clement A., Zhang, C., Kodama, J., Shioya K., Yamaguchi, T., Sainoki, A., Fukuda, D., Fujii Y., Sharifzadeh, M., "Displacement Measurements and Numerical Analysis of Long-Term Rock Slope Deformation at Higashi-Shikagoe Limestone Quarry, Japan," Advances in Civil Engineering, 1316402, 2021.

Sainoki, A., Schwartzkoff, A.K., Jiang, L., Mitri, H.S., "Numerical Modeling of Complex Stress State in a Fault Damage Zone and Its Implication on Near‐Fault Seismic Activity," Journal of Geophysical Research: Solid Earth, 126, 7, 2021: e2021JB021784.

Akiko Nakamasu

Akiko M. Nakamasu, "Correspondences Between Parameters in a Reaction-Diffusion Model and Connexin Functions During Zebrafish Stripe Formation," Front. Phys, 9, 805659, 2022.

Mizuki Yamada

Yamada M, Tanaka S, Miyazaki T, Aida M, "Expression of the auxin biosynthetic genes YUCCA1 and YUCCA4 is dependent on the boundary regulators CUP-SHAPED COTYLEDON genes in the Arabidopsis thaliana embryo," Plant Biotechnol, 39, 37-42, 2022.

Suzuki, R., Yamada, M., Higaki, T., Aida, M., Kubo, M., Tsai, A.Y-L., Sawa, S., "PUCHI regulates giant cell morphology formation during root-knot nematode infection in Arabidopsis thaliana," Frontiers in Plant Science, 12, 755610, 2021.

Sajid Fasal

Sajid Fazal, Ruda Lee*, "Biomimetic Bacterial Membrane Vesicles for Drug Delivery," Applications. Pharmaceutics, 13, 1430, 2021.

Takahiro Hosono

Aizawa, M., Mizota, C., Hosono, T., Shinjo, R., Furukawa, Y., Nobori, Y., "Lead isotopic characteristics of gun bullets prevailed during the 19th century in Japan: Constraints on the provenance of lead source from the United Kingdom and Japan," Journal of Archaeological Science: Reports, 41, 103268, 2022.

Mizota, C., Hansen, R., Hosono, T., Okumura, A., "Museum-archived and recent acquisition nitrates from the Atacama Desert, Chile, South America: refinement of the dual isotopic compositions (δ15N vs. δ18O)," Isotopes in Environmental and Health Studies, 58, 1-17, 2022.

Romero-Mujalli, G., Hartmann, J., Hosono, T., Louvat, P., Okamura, K., Delmelle, P., Amann, T., Böttcher, M.E., "Hydrothermal and magmatic contributions to surface waters in the Aso caldera, southern Japan: Implications for weathering processes in volcanic areas," Chemical Geology, 588, 120612, 2022.

Tanimizu, M., Sugimoto, N., Hosono, T., Kuribayashi, C., Morimoto, T., Ito, A., Umam, R., Nishio, Y., Nagaishi, K., Ishikawa, T., "Application of B and Li isotope systematics for detecting chemical disturbance in groundwater associated with large shallow inland earthquakes in Kumamoto, Japan," Geochemical Journal, 55, 241-250, 2021.

Rahman, A.T.M.S., Hosono, T., Tawara, Y., Fukuoka, U., Hazart, A., Shimada, J., "Multiple-tracers-aided surface-subsurface hydrological modeling for detailed characterization of regional catchment water dynamics in Kumamoto area, southern Japan," Hydrogeology Journal, 29, 1885-1904, 2021.

Hosono, T., Yamanaka, C., "Origins and pathways of deeply derived carbon and fluids observed in hot spring waters from non-active volcanic fields, western Kumamoto, Japan," Earth, Planets and Space, 155, 73, 2021.

Kei Ishida

Kazuki Yokoo, Kei Ishida*, Ali Ercan, Tongbi Tu, Takeyoshi Nagasato, Masato Kiyama, Motoki Amagasaki, "Capabilities of deep learning models on learning physical relationships: Case of rainfall-runoff modeling with LSTM", Science of The Total Environment, 802, 149876, 2022. (*corresponding)

Kei Ishida, Masato Kiyama, Ali Ercan, Motoki Amagasaki, Tongbi Tu, "Multi-time-scale input approaches for hourly-scale rainfall–runoff modeling based on recurrent neural networks," Journal of Hydroinformatics, 23(6), 1312–1324, 2021.

Yuta Nakashima

Yuta Nakashima*, Mami Akaike, Masaki Kounoura, Keita Hayashi, Kinichi Morita, Yuji Oki, Yoshitaka Nakanishi, "Evaluation of osteoblastic cell behavior upon culture on titanium substrates photo-functionalized by vacuum ultra-violet treatment," Experimental Cell Research, 410, 112944, 2022.

Yoshitaka Nakanishi, Hajime Yamaguchi, Yusuke Hirata, Yuta Nakashima, Yukio Fujiwara, "Micro-abrasive glass surface for producing microplastics for biological tests," Wear, 477, 203816,

2021.

Hajime Yamaguchi, Katsunori Higuchi, Koshi Sakata, Tetsuya Akiyama, Keiji Kasamura, Yuta Nakashima, Yoshitaka Nakanishi, "Hydrophilic sealing material for live centers in machine tools," Wear, 477, 203838, 2021.

Souichiro Fukuyama, Seitaro Kumamoto, Seiya Nagano, Shoma Hitotsuya, Keiichiro Yasuda, Yusuke Kitamura, Masaaki Iwatsuki, Hideo Baba, Toshihiro Ihara, Yoshitaka Nakanishi, and Yuta Nakashima*, "Detection of cancer cells in whole blood using a dynamic deformable microfilter and a nucleic acid aptamer," Talanta, 228, 122239, 2021.

U Rajendra Acharya

U Raghavendra, Anjan Gudigar, Tejaswi N Rao, V Rajinikanth, Edward J Ciaccio, Chai Hong Yeong, Suresh Chandra Satapathy, Filippo Molinari, U Rajendra Acharya, "Feature-versus deep learning-based approaches for the automated detection of brain tumor with magnetic resonance images: A comparative study," International Journal of Imaging Systems and Technology, 32 (2), 501-516, 2022.

HW Loh, CP Ooi, SG Dhok, M Sharma, AA Bhurane, UR Acharya, "Automated detection of cyclic alternating pattern and classification of sleep stages using deep neural network," Applied Intelligence, 52 (3), 2903-2917, 2022.

G Bargshady, X Zhou, PD Barua, R Gururajan, Y Li, UR Acharya, "Application of CycleGAN and transfer learning techniques for automated detection of COVID-19 using X-ray images," Pattern Recognition Letters, 153, 67-74, 2022.

Padmavathi Kora, Chui Ping Ooi, Oliver Faust, U Raghavendra, Anjan Gudigar, Wai Yee Chan, K Meenakshi, K Swaraja, Pawel Plawiak, U Rajendra Acharya,"Transfer learning techniques for medical image analysis: A review," Biocybernetics and Biomedical Engineering, 42(1), 79-107, 2022.

V Sree, J Mapes, S Dua, OS Lih, JEW Koh, EJ Ciaccio, UR Acharya, "A novel machine learning framework for automated detection of arrhythmias in ECG segments," Journal of Ambient Intelligence and Humanized Computing, 12 (11), 10145-10162, 2021.

Shu Lih Oh, V Jahmunah, N Arunkumar, Enas W Abdulhay, Raj Gururajan, Nahrizul Adib, Edward J Ciaccio, Kang Hao Cheong, U Rajendra Acharya, "A novel automated autism spectrum disorder detection system," Complex & Intelligent Systems, 7 (5), 2399-2413, 2021.

YM Chan, EYK Ng, V Jahmunah, JEW Koh, SL Oh, WS Han, LWL Yip, UR Acharya, "Automated detection of glaucoma using elongated quinary patterns technique with optical coherence tomography angiogram images," Biomedical Signal Processing and Control, 69, 102895, 2021.

Kang Hao Cheong, Kenneth Jian Wei Tang, Xinxing Zhao, Joel En Wei Koh, Oliver Faust, Raj Gururajan, Edward J Ciaccio, V Rajinikanth, U Rajendra Acharya, "An automated skin melanoma detection system with melanoma-index based on entropy features," Biocybernetics and Biomedical Engineering ,41 (3), 997-1012, 2021.

Anjan Gudigar, U Raghavendra, Jyothi Samanth, Mokshagna Rohit Gangavarapu, Abhilash Kudva,

Ganesh Paramasivam, Krishnananda Nayak, Ru-San Tan, Filippo Molinari, Edward J Ciaccio, U Rajendra Acharya, "Automated detection of chronic kidney disease using image fusion and graph embedding techniques with ultrasound images," Biomedical Signal Processing and Control, 68, 102733, 2021.

D Maheshwari, SK Ghosh, RK Tripathy, M Sharma, UR Acharya, "Automated accurate emotion recognition system using rhythm-specific deep convolutional neural network technique with multi-channel EEG signals," Computers in Biology and Medicine, 134, 104428, 2021.

V Jahmunah, EYK Ng, TR San, UR Acharya, "Automated detection of coronary artery disease, myocardial infarction and congestive heart failure using GaborCNN model with ECG signals," Computers in biology and medicine, 134, 104457, 2021.

Vicnesh Jahmunah, Vidya K Sudarshan, Shu Lih Oh, Raj Gururajan, Rashmi Gururajan, Xujuan Zhou, Xiaohui Tao, Oliver Faust, Edward J Ciaccio, Kwan Hoong Ng, U Rajendra Acharya, " Future IoT tools for COVID-19 contact tracing and prediction: A review of the state-of-the-science," International journal of imaging systems and technology, 31 (2), 455-471, 2021.

M Coskun, O Yildirim, Y Demir, UR Acharya, "Efficient deep neural network model for classification of grasp types using sEMG signals," Journal of Ambient Intelligence and Humanized Computing, 1-14, 2021.

DR Nayak, D Das, B Majhi, SV Bhandary, UR Acharya, "ECNet: An evolutionary convolutional network for automated glaucoma detection using fundus images," Biomedical Signal Processing and Control, 67, 102559, 2021.

Joel En Wei Koh, Simona De Michele, Vidya K Sudarshan, V Jahmunah, Edward J Ciaccio, Chui Ping Ooi, Raj Gururajan, Rashmi Gururajan, Shu Lih Oh, Suzanne K Lewis, Peter H Green, Govind Bhagat, U Rajendra Acharya, "Automated interpretation of biopsy images for the detection of celiac disease using a machine learning approach," Computer Methods and Programs in Biomedicine, 203, 106010, 2021.

X Zhao, CKE Ang, UR Acharya, KH Cheong, "Application of Artificial Intelligence techniques for the detection of Alzheimer's disease using structural MRI images," Biocybernetics and Biomedical Engineering, 41 (2), 456-473, 2021.

Jens Hartmann

Romero-Mujalli, G., Hartmann, J., Hosono, T., Louvat, P., Okamura, K., Delmelle, P., Amann, T., Böttcher, M.E., "Hydrothermal and magmatic contributions to surface waters in the Aso caldera, southern Japan: Implications for weathering processes in volcanic areas," Chemical Geology, 588, 120612, 2022

Zoran Ren

Nishi, M., Tanaka, S., Mori, A., Vesenjak, M., Ren, Z., Hokamoto, K. "Mechanism Elucidation of High-Pressure Generation in Cellular Metal at High-Velocity Impact," Metals, 12 (1), 128. 2022.
*Special Issue "Explosive Welding and Impact Mechanics of Metal and Alloys" (Special editors: Pengwan Chen, Kazuyuki Hokamoto and Zoran Ren)

Shin-Ichi Ohira

S. Ohira*, Y. Sato, K. Horiuchi, C.P. Shelor, and K. Toda, "Indirect Potentiometric pH Detection of Weak Acids with Absolute Quantitation by a Theoretical Approach," Analytical Chemistry, 93,

36, 12305-12311, 2021.

Keitaro Takahashi

Tomonosuke Kikunaga, Shinnosuke Hisano, Hiroki Kumamoto, and Keitaro Takahashi, "Constraints on ultra-low-frequency gravitational waves from an eccentric supermassive black hole binary," Monthly Notices of the Royal Astronomical Society, 509, 4, 5188-5196, 2022.

Yoo, Chul-Moon; Naruko, Atsushi; Sakurai, Yusuke; Takahashi, Keitaro; Takamori, Yohsuke; Yamauchi, Daisuke, "Axion Cloud Decay due to the Axion-photon Conversion with Background Magnetic Fields," Publications of the Astronomical Society of Japan, 74, 1, 64-72, 2022.

Cathryn M. Trott, C.H. Jordan, J.L.B. Line, C.R. Lynch, S. Yoshiura, B. McKinley, P. Dayal, B. Pindor, A. Hutter, K. Takahashi, R.B. Wayth, N. Barry, A. Beardsley, J. Bowman, R. Byrne, A. Chokshi, B. Greig, K. Hasegawa, B.J. Hazelton, E. Howard, D. Jacobs, M. Kolopanis, D.A. Mitchell, M.F. Morales, S. Murray, J.C. Pober, M. Rahimi, S.J. Tingay, R.L. Webster, M. Wilensky, J.S.B. Wyithe, Q. Zheng, "Constraining the 21cm brightness temperature of the IGM at z=6.6 around LAEs with the Murchison Widefield Array," Monthly Notices of the Royal Astronomical Society Letters, 507, 772-780, 2021.

Jaikhomba Singha, Mayuresh P Surnis, Bhal Chandra Joshi, Pratik Tarafdar, Prerna Rana, Abhimanyu Susobhanan, Raghav Girgaonkar, Neel Kolhe, Nikita Agarwal, Shantanu Desai, T Prabu, Adarsh Bathula, Subhajit Dandapat, Lankeswar Dey, Shinnosuke Hisano, Ryo Kato, Divyansh Kharbanda, Tomonosuke Kikunaga, Piyush Marmat, Sai Chaitanya Susarla, Manjari Bagchi, Neelam Dhanda Batra, Arpita Choudhury, A Gopakumar, Yashwant Gupta, M A Krishnakumar, Yogesh Maan, P K Manoharan, K Nobleson, Arul Pandian, Dhruv Pathak, Keitaro Takahashi, "Evidence for profile changes in PSR J1713+0747 using the uGMRT," Monthly Notices of the Royal Astronomical Society Letters, 507, L57-L61, 2021.

Shintaro Yoshiura, Hayato Shimabukuro, Kenji Hasegawa, Keitaro Takahashi, "Predicting 21cm-line map from Lyman α emitter distribution with Generative Adversarial Networks," Monthly Notices of the Royal Astronomical Society, 506, 357-371, 2021.

S. Yoshiura, B. Pindor, J.L.B. Line, N. Barry, C. M. Trott, A. Beardsley, J. Bowman, R. Byrne, A. Chokshi, B. J. Hazelton, K. Hasegawa, E. Howard, B. Greig, D. Jacobs, C. H. Jordan, R. Joseph, M. Kolopanis, C. Lynch, B. McKinley, D. A. Mitchell, M. F. Morales, S. Murray, J. C. Pober, M. Rahimi, K. Takahashi, S. J. Tingay, R. B. Wayth, R. L. Webster, M. Wilensky, J. S. B. Wyithe, Z. Zhang, Q. Zheng, "A new MWA limit on the 21 cm Power Spectrum at Redshifts ∼ 13–17," Monthly Notices of the Royal Astronomical Society, 505, 4775-4790, 2021.

Kumamoto, H.; Hisano, S.; Takahashi, K., "Constraints on ultra-low-frequency gravitational waves with statistics of pulsar spin-down rates II: Mann-Whitney U test," Publications of the Astronomical Society of Japan, 73, 1001, 2021.

Yutaka Kuwahara

Yutaka Kuwahara, Mio Ito, Tatsumi Iwamoto, Makoto Takafuji, Hirotaka Ihara, Naoya Ryu, and Tomoyasu Mani, "Chemical redox-induced chiroptical switching of supramolecular assemblies of viologens," RSC Advances, 12, 4, 2019-2025, 2022.

Internationally Collaborated Papers
by IROAST Visiting Professors and their Host Professors

Paul Bowen & Yoji Mine

S. Ueki, Y. Mine, X. Lu, Y.L. Chiu, P. Bowen, K. Takashima, “Effect of geometric lath orientation on fatigue crack propagation via out-of-plane dislocation glide in martensitic steel,” Scr. Mater., 203, 114045, 2021.

Martin Dienwiebel & Yoji Mine

K. Takagi, E. Hashamova, M. Dienwiebel, Y. Mine, K. Takashima, “Correlation of wear behaviour and microstructural evolution in Mg-Zn-Y alloys with long-period stacking ordered phase,” Wear, 482–483, 203983, 2021

Derek Elsworth & Atsushi Sainoki

Schwartzkopff, A.K., Sainoki, A., Elsworth, D., “Numerical simulation of mixed aseismic/seismic fault-slip induced by fluid injection using coupled X-FEM analysis,” International Journal of Rock Mechanics and Mining Sciences, 147, 104871, 2021.

Etsuko Fujita & Yutaka Kuwahara

Brian N. DiMarco, Dmitry E. Polyansky, David C. Grills, Ping Wang, Yutaka Kuwahara, Xuan Zhao, Etsuko Fujita, “Structural and Electronic Influences on Rates of Tertpyridine−Amine CoIII−H Formation During Catalytic H2 Evolution in an Aqueous Environment,” ChemPhysChem, 22, 14, 1478-1487, 2021.

Tomonari Furukawa & Makoto Kumon

Y. Qin, M. Kumon and T. Furukawa, "Estimation of a Human-Maneuvered Target Incorporating Human Intention," Sensors, 21, 16, 5316, 2021.

Jens Hartmann & Takahiro Hosono

Romero-Mujalli, G., Hartmann, J., Hosono, T., Louvat, P., Okamura, K., Delmelle, P., Amann, T., Böttcher, M.E., “Hydrothermal and magmatic contributions to surface waters in the Aso caldera, southern Japan: Implications for weathering processes in volcanic areas,” Chemical Geology, 588, 120612.

Yang Kim & Shinya Hayami

M. Nakamura, Md. S. Islam, M. A. Rahman, N. N. Rabin, M. Fukuda, Y. Sekine, J. N.

Beltramini, Y. Kim, S. Hayami, "Microwave aided conversion of cellulose to glucose using polyoxometalate as catalyst," RSC Adv., 11(55), 34558-34563, 2021.

S. Kusumoto, H. Umeno. Y. Kim, Y. Sekine, M. Nakamura, S. Hayami, "Structural and Magnetic Characterization of Homo- and Heterometallic Trinuclear Ni(II) and Cu(II) Clusters with N2O6 Acyclic Polydentate Ligand," Chem. Lett., 50(12), 1945-1948, 2021.

S. Kusumoto, A. Sugimoto, D. Kosumi, Y. Kim, Y. Sekine, M. Nakamura, S. Hayami, "A plastically bendable and polar organic crystal," CrystEngComm., 23(33), 5560-5563 2021.

A. Hara, S. Kusumoto, Y. Sekine, J. Harrowfield, Y. Kim, S. Hayami, M. Nakamura, "1D Mn (III) coordination polymers exhibiting chiral symmetry breaking and weak ferromagnetism," Dalton. Trans., 16(50), 5428-5432, 2021.

Tomoyasu Mani & Yutaka Kuwahara

Yutaka Kuwahara, Mio Ito, Tatsumi Iwamoto, Makoto Takafuji, Hirotaka Ihara, Naoya Ryu, and Tomoyasu Mani, "Chemical redox-induced chiroptical switching of supramolecular assemblies of viologens," RSC Advances, 12, 4, 2019-2025, 2022.

Dmitri Aleks Molodov & Sadahiro Tsurekawa

L.A. Barrales-Mora, Y. Tokuda, D.A. Molodov, S. Tsurekawa, "On incipient plasticity in the vicinity of grain boundaries in aluminum bicrystals: Experimental and simulation nanoindentation study," Materials Science and Engineering: A, 828, 142100, 2021.

J.E. Brandenburg, J. Seo, K. Eto, D.A. Molodov, S. Tsurekawa, "Influence of symmetrical <10$\bar{1}$0> high-angle tilt grain boundaries on the local mechanical properties of magnesium bicrystals," Materials Science and Engineering: A, 826, 141913, 2021.

Reiko Oda & Makoto Takafuji

N. Nagatomo, H. Oishi, Y. Kuwahara, M. Takafuji, R. Oda, T. Hamada H. Ihara, "Enantioselective self-assembled nanofibrillar network with glutamide-based organogelator," Nanomaterials, 11(6), 1376, 2021.

*Special issue "Self-assembled nanostructures for molecular recognition" (Special editors: Makoto Takafuji and Hirotaka Ihara)

T. Harada, H. Yanagita, N. Ryu, Y. Okazaki, Y. Kuwahara, M. Takafuji, S. Nagaoka, H. Ihara, R. Oda, “Lanthanide ion-doped silica nanohelix: a helical inorganic network acts as a chiral source for metal ions,” Chemical Communications (RSC), 57, 4392-4395, 2021.

Zoran Ren & Kazuyuki Hokamoto

Nishi, M., Tanaka, S., Mori, A., Vesenjak, M., Ren, Z., Hokamoto, K. “Mechanism Elucidation of High-Pressure Generation in Cellular Metal at High-Velocity Impact,” Metals, 12 (1), 128, 2022.

*Special Issue “Explosive Welding and Impact Mechanics of Metal and Alloys” (Special editors: Pengwan Chen, Kazuyuki Hokamoto and Zoran Ren)

Internationally Collaborated Papers
by IROAST Young Internship Researchers and their Host Professors
(for the period of phase 1)

Andri Hardiansyah &Tetsuya Kida

Hardiansyah, A., Budiman, W.J., Yudasari, N., Isnaeni, Kida, T., Wibowo, A, "Facile and Green Fabrication of Microwave-Assisted Reduced Graphene Oxide/Titanium Dioxide Nanocomposites as Photocatalysts for Rhodamine 6G Degradation," ACS Omega, 2021, 6, 47, 32166–32177, 2021.

Peng Kong &Atsushi Sainoki

Kong P., Jiang L., Shu J., Sainoki A., Wang Q, "Effect of Fracture Heterogeneity on Rock Mass Stability in a Highly Heterogeneous Underground Roadway," Rock Mechanics and Rock Engineering, 52, 4547–4564, 2019.

Mona Pakdel & Hamid Hosano

Mona Pakdel, Zahra Moosavi-Nejad, Rouha Kasra Kermanshahi, Hamid Hosano, "Self-assembled uniform keratin nano particles as building blocks for nanofibrils and nanolayers derived from industrial feather waste" Journal of Cleaner Production, 335,10, 130331, 2022.

Song Yeul Lee & Ruda Lee

Lee S.Y., Lee R., Kim E., Lee S., Park Y.I. "Near-Infrared Light-Triggered Photodynamic Therapy and Apoptosis Using Upconversion Nanoparticles with Dual Photosensitizers," Frontiers in Bioengineering and Biotechnology, 8, 275, 2020.

Farzan Zare & Hamid Hosano

Zare F., Ghasemi N., Bansal N., Garg A., Hosano H. "Increasing the Production Yield of White Oyster Mushrooms with Pulsed Electric Fields," IEEE Transactions on Plasma Science, 49, 2, 805-812, 9340594, 2021.

Sajjan Pokhrel & Atsushi Sainoki

Pokhrel S., Sasmito A.P., Sainoki A., Tosha T., Tanaka T., Nagai C., Ghoreishi-Madiseh S.A."Field-scale experimental and numerical analysis of a downhole coaxial heat exchanger for geothermal energy production" Renewabe Energy, 182, 521-535, 2022.