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Session No.	Paper Title	Author and Affiliation
1-1: Advanced Lithography and Patterning		
1-1-1: Special Talk		
2020-11-S1	Full Chip Curvilinear ILT with both Multi-Beam and VSB Mask Writers That Improves Wafer Process Windows by 2X	Linyong (Leo) Pang 1, Ezequiel Vidal Russell 2, Bill Baggenstoss 2, Yang Lu 2, Michael Lee 2, Jennefir Digaum 2, Ming-Chuan Yang 2, Ryan Pearman 1, P.Jeffrey Ungar 1, Lu Sha 1, Ali Bouaricha 1, Michael Pomerantsev 1, Mariusz Niewczas 1, Kechang Wang 1, Bo Su 1, Michael Meyer 1, Aki Fujimura 1, 1 D2S and 2 Micron Technol., USA
1-1-2: Advanced Lithography and Patterning		
2020-11-1	Pattern Collapse Mitigation by Controlling Atmosphere During Development Process for Semiconductor Lithography	Masahiko Harumoto 1,2, Tomohiro Motono 2, Andreia Figueiredo dos Santos 3, Chisayo Mori 2, Yuji Tanaka 2, Harold Stokes 4, Masaya Asai 2, Julius Joseph Santillan 1, Toshiro Itani 1 and Takahiro Kozawa 1, 1 Osaka Univ., 2 SCREEN Semiconductor Solutions, Japan, 3 SCREEN SPE France, France and 4 SCREEN SPE Germany, Germany
2020-11-2	Optimization of Displacement Talbot Lithography for Uniform High Aspect Ratio Gratings Fabrication	Zhitian Shi 1,2, Konstantins Jefimovs 1,2, Lucia Romano 1,2,3 and Marco Stampanoni 1,2, 1 Paul Scherrer Inst., 2 ETH Zürich, Switzerland and 3 Univ. of Catania, Italy
2020-11-3	Update of >300W High Power LPP-EUV Source Challenge II for Semiconductor HVM	Hakaru Mizoguchi, Hiroaki Nakarai, Tamotsu Abe, Hiroshi Tanaka, Yukio Watanabe, Tsukasa Hori, Yutaka Shiraishi, Tatsuya Yanagida, Georg Soumagne, Tsuyoshi Yamada and Takashi Saitou, Gigaphoton, Japan
2020-11-4	Comparison of EUV Binary Intensity Mask and Phase Shift Mask with Mo/Si and Ru/Si Multilayer for 0.55 NA	In-Hwa Kang, Jang-Gun Park, Beom-Jun Jeon and Hye-Keun Oh, Hanyang Univ., Korea
2020-11-5	Relative Lifetimes of Various EUV Pellicles	Chung-Hyun Ban, In-Hwa Kang, Won-Yung Choi, and Hye-Keun Oh, Hanyang Univ., Korea
1-2: Electron and Ion Beam Technologies		
2020-12-1	Electron Scattering Investigation on Advanced ArF and EUV Masks with Monte Carlo Method	Chun-Hung Liu 1, Hsiang-Yi Hsieh 1, Chieh-Yu Mao 1, Shuen-Ping Wang 1, Kuan-Fu Huang 1, Fei-Ming Huang 1, Wei-Yung Hsi 1, Chih-Chiang Wu 1, Fu-Chu Hsu 1, Kuen-Yu Tsai 2, 1 Natl. Taitung Univ. and 2 Natl. Taiwan Univ., Taiwan
2020-12-2	Plasma Analysis of the FAB Source for The SAB Process by PIC-MCC Simulation	R. Morisaki 1, J. Sakurai 1, C. Oka 1, T. Yamazaki 1, T. Hirai 2, T. Takahashi 2, H. Tsuji 2, N. Ohno 1 and S. Hata 1, 1 Nagoya Univ., 2 NGK INSULATORS, Japan
2020-12-3	Investigation of Non-Charging Exposure Conditions for Insulating Resist Films in Electron Beam Lithograph	Kento Kubo, Kentaro Kojima Yoshinobu Kono and Masatoshi Kotera, Osaka Inst. of Technol., Japan
2020-12-4	Potential Distribution on The Resist Surface after Electron Beam Irradiation with Respect to Resist Thickness and Elapsed Time	Kentaro Kojima, Kento Kubo, Yoshinobu Kono and Masatoshi Kotera, Osaka Inst. of Technol., Japan
1-3: Patterning Materials		
2030-13-1	Estimation of Electron Affinity of Photoacid Generators: Density Functional Theory Calculations Using Static and Dynamic Models	Kazumasa Okamoto and Takahiro Kozawa, Osaka Univ., Japan
2030-13-2	Effects of Resist Film Thickness on Line-and-Space Patterns of Chemically Amplified Resists Used for Electron Beam Lithography	Akihiro Konda 1, Kazumasa Okamoto 1, Takahiro Kozawa 1 and Takao Tamura 2, 1 Osaka Univ. and 2 NuFlare Technol., Japan
2030-13-3	Study on Primary Process of Beam-Induced Reaction of Metal Resist Ligands	Kengo Ikeuchi 1, Tomoe Otsuka 1, Yusa Muroya 1, Takahiro Kozawa 1, Takuya Ikeda 2, Yoshitaka Komuro 2 and Daisuke Kawana 2, 1 Osaka Univ. and 2 Tokyo Ohka Kogyo, Japan

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2030-13-4	Application of Ethyltrimethylammonium Hydroxide (ETMAH) as an Alternative Developer Solution / Process for Semiconductor Lithography	Julius Joseph Santillan 1, Masahiko Harumoto 2, Tomohiro Motono 2, Andreia Figueiredo dos Santos 3, Chisayo Mori 2, Yuji Tanaka 2, Harold Stokes 4, Masaya Asai 2 and Toshiro Itani 1, 1 Osaka Univ., 2 SCREEN Semiconductor Solutions, Japan, 3 SCREEN SPE France, France and 4 SCREEN SPE Germany, Germany
2030-13-5	Improvement of Metal Diffusion in Polymer Matrices in Vapor Phase Infiltration	Norikatsu Sasao, Shinobu Sugimura and Koji Asakawa, Kioxia, Japan
2030-13-6	Machine Learning of Stochastic Effects in Chemically Amplified Resists Used for Extreme Ultraviolet Lithography	Kazuki Azumagawa and Takahiro Kozawa, Osaka Univ., Japan
2030-13-7	Stochastic Simulations of Pattern Formation for Various Types of Resists in Extreme Ultraviolet Lithography	K. Imai, B. Inoue, M. Koyama, M. Shirai, Y. Hirai and M. Yasuda, Osaka Pref. Univ., Japan
2030-13-8	Molecular Dynamics Study of Resist Structure Changes During Electron Beam Lithography	Yuya Miyashita, Masamitsu Shirai, Yoshihiko Hirai and Masaaki Yasuda, Osaka Pref. Univ., Japan
2030-13-9	Study on Irradiation Effects by Femtosecond-Pulsed Extreme Ultraviolet in Main-Chain Scission Resist	Yuji Hosaka, Hiroki Yamamoto, Masahiko Ishino, Thanh-Hung Dinh, Masaharu Nishikino and Yasunari Maekawa, QST, Japan
2-1: Nanocarbon & 2D Materials		
2-1-1: Nanocarbons		
2020-21-1	Application of Nitrogen-Doped Amorphous Carbon Coating for Copper Pads in Preventing Moisture and Direct Wire Bonding	Ploybussara Gomasang and Kazuyoshi Ueno, Shibaura Inst. of Technol., Japan
2020-21-2	Fabrication of Carbon Nanotube Thin Films for Flexible Transistor Applications Using a Cross-linked Amine Polymer	Kaisei Matsumoto, Kazuki Ueno, Jun Hirotani, Yutaka Ohno and Haruka Omachi, Nagoya Univ., Japan
2020-21-3	Room Temperature Graphitization in Solid Phase Reaction Using Ni Nanoparticles	S. Elnobi, S. Sharma, G. Kalita and M. Tanemura, Nagoya Inst. of Technol., Japan
2020-21-4	Development of In Situ Time-Domain Thermoreflectance for Flexible Thin Films during Electrolyte Gating	Kan Ueji 1, Yuya Matuoka 1, Nobuhiro Muto 1, Katuya Watanabe 2, Takashi Yagi 3, Yota Ichinose 1, Akari Yoshida 1, Yohei Yomogida 1, Taishi Takenobu 2 and Kazuhiro Yanagi 1, 1 Tokyo Metropolitan Univ., 2 Nagoya Univ. and 3 AIST, Japan
2020-21-5	In-Situ Observation of Anisotropic Thermal Transport on a Bundle of Single-Walled Carbon Nanotubes	Hiromu Hamasaki, Seiya Takimoto and Kaori Hirahara, Osaka Univ., Japan
2020-21-6	Diameter Dependent Indirect-Direct Band Gap Crossover of Single Walled MoS_2 Nanotubes	Kaoru Hisama 1, Mina Maruyama 2, Susumu Okada 2, Shohei Chiashi 1 and Shigeo Maruyama 1, 1 Univ. of Tokyo and 2 Univ. of Tsukuba, Japan
2020-21-7	Electrodeposition of Pd-Ni Alloy on The Buckypaper for H_2 Gas Sensor	Jae Keon Kim 1,2, Maeum Han 2, J. Lee 1,2, Yeongsam Kim 1,2, Namgon Do 1,2, H.K. An 2, S.H. Kong 1 and Daewoong Jung 2, 1 Kyungpook Natl. Univ. and 2 KITECH, Korea
2020-21-8	Geometric and Electronic Structures of a Three-Dimensional Covalent Network of SP_2 and SP_3 C Atoms	Yasumaru Fujii, Mina Maruyama, Nguyen Thanh Cuong and Susumu Okada, Univ. of Tsukuba, Japan

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Session No.	Paper Title	Author and Affiliation
2020-21-9	Structure and Charge Transport Analyses in Ionic-Liquid-Gated Conducting Polymer Thin Films with 2D-Ordered Crystallites	Shun-ichiro Ito 1, Kaito Kanahashi 2, Hisaaki Tanaka 1, Hiroshi Ito 1, Hiromichi Ohta 3, Taishi Takenobu 1, 1 Nagoya Univ., 2 Waseda Univ. and 3 Hokkaido Univ., Japan
2020-21-10	Dimensionality of Thermoelectric Properties in Low Dimensional Semiconducting Materials	Yota Ichinose 1, Manaho Matsubara 2, Yohei Yomogida 1, Akari Yoshida 1, Kan Ueji 1, Kaito Kanahashi 3, Jiang Pu 4, Taishi Takenobu 4, Takahiro Yamamoto 2 and Kazuhiro Yanagi 1, 1 Tokyo Metropolitan Univ., 2 Tokyo Univ. of Sci., 3 Waseda Univ. and 4 Nagoya Univ., Japan
2020-21-11	Gelation of Isomaltodextrin for Semiconducting SWCNT Separation	Yuki Matsunaga, Jun Hirotani, Yutaka Ohno and Haruka Omachi, Nagoya Univ., Japan
2-1-2: 2D Materials		
2020-21-12	Protein Detection by Electron Donor Using Epitaxial Graphene Film on SiC Substrate	Hiroki Nakai, Daiu Akiyama, Yoshiaki Taniguchi, Iori Kishinobu, Takuya Ikeda, Atsushi Tabata, Hideaki Nagamune, Yasuhide Ohno and Masao Nagase, Tokushima Univ., Japan
2020-21-13	Improved Sensitivity of Surface-Enhanced Raman Spectroscopy (SERS) Substrates Using Monolayer Graphene	T. Uchino 1, K. Shiga 1, K. Imai 1, M. Kusano 1, H. Fukidome 2, A. Satou 2 and T. Otsuji 2, 1 Tohoku Inst. Technol. and 2 Tohoku Univ., Japan
2020-21-14	Blackbody-Like Infrared Radiation in Stacked Graphene P-N Junction Diode	Naruse Murakami, Yoshiki Sugiyama, Yasuhide Ohno and Masao Nagase, Tokushima Univ., Japan
2020-21-15	Effects of Thickness and Interfacial Coupling on The Thermal Transport of Two-Dimensional Molybdenum Disulfide Homogeneous Structures	Wenyu Yuan, Kan Ueji, Takahiko Endo, Hong En Lim, Yasumitsu Miyata, Yohei Yomogida and Kazuhiro Yanagi, Tokyo Metropolitan Univ., Japan
2020-21-16	High Sensitivity and Flexible Fabric Strain Sensor Based on Electrochemical Graphene	Hsin-Jou Wang 1, Tun-Yi Cheng 1, Cheng-Chun Huang 2, Ching-Yuan Su 2 and Yao-Chuan Tsai 1, 1 Natl. Chung Hsing Univ. and 2 Natl. Central Univ., Taiwan
2020-21-17	~~Black-Body Emitter of Graphene on SIC~~ Withdrawn	~~Yoshiki Sugiyama, Naruse Murakami, Takaya Kujime, Yasuhide Ohno and Masao Nagase, Tokushima Univ., Japan~~
2020-21-18	Position-Controlled Chemical Vapor Deposition Growth of Large Continuous MoS_2 Films	Hiroki Waizumi 1,2, Atsushi Ando 1, Tadahiro Komeda 2 and Toshifumi Irisawa 1, 1 AIST and 2 Tohoku Univ., Japan
2020-21-19	Adsorption and Hydrogenation of CO_2 on Heat-Treated Hydrogen Boride Sheets	Taiga Goto 1, Shin-ichi Ito 1,2, Takahiro Kondo 1,2, 1 Univ. of Tsukuba and 2 Tokyo Tech., Japan
2020-21-20	Controlled, Wafer-Scale Growth of Transition Metal Chalcogenide Nanowires	Hong En Lim 1, Yusuke Nakanishi 1, Zheng Liu 2, Jiang Pu 3, Takahiko Endo 1, Chisato Ando 1, Hiroshi Shimizu 1, Kazuhiro Yanagi 1, Taishi Takenobu 3 and Yasumitsu Miyata 1, 1 Tokyo Metropolitan Univ., 2 AIST and 3 Nagoya Univ., Japan
2020-21-21	Detection of Glutathione at Low Concentration by Chemical Reactions on Graphene FET	Yuri Sakamoto, Takashi Ikuta and Kenzo Maehashi, Tokyo Univ. of Agriculture, Japan
2020-21-22	Synthesis of 1D Transition-Metal Dichalcogenides by Chalcogenization of Transition-Metal Oxide Nanowires	Yohei Yomogida, Ryoga Tanaka, Mai Nagano, Yasumitsu Miyata and Kazuhiro Yanagi, Tokyo Metropolitan Univ., Japan
2020-21-23	Electron Transport Properties of One-Dimensional Transition Metal Chalcogenide Networks	Hiroshi Shimizu 1, Jiang Pu 2, Hong En Lim 1, Yusuke Nakanishi 1, Zheng Liu 3, Takahiko Endo 1, Taishi Takenobu 2 and Yasumitsu Miyata 1, 1 Tokyo Metropolitan Univ., 2 Nagoya Univ. and 3 AIST, Japan

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2020-21-24	Transport and Optical Properties of Salt-Coordinated Monolayer MoS_2	Hiroto Ogura 1, Yoshiyuki Nonoguchi 2, Toshifumi Irisawa 3, Takahiko Endo 1, Hong En Lim 1, Yusuke Nakanishi 1 and Yasumitsu Miyata 1, 1 Tokyo Metropolitan Univ., 2 NAIST and 3 AIST, Japan
2-2: Nanodevices		
2-2-1: Special Talk		
2020-22-S2	Wurtzite InP Microdisks: from Epitaxy to Room-Temperature Lasing	Philipp Staudinger, Svenja Mauthe, Noelia Vico Triviño, Steffen Reidt, Kirsten Moselund and Heinz Schmid, IBM Res. Zurich, Switzerland
2-2-2: Devices by Advanced Materials		
2020-22-1	Design of Weight Function Controllable Single-Electron Neural Network Circuit for Reservoir Computing	Masaki Ueno and Takahide Oya, Yokohama Natl. Univ., Japan
2020-22-2	Voltage-Induced Large Magnetocapacitance Effect in MgO-Based Magnetic Tunnel Junctions	Kentaro Ogata 1, Yusuke Nakayama 1, Gang Xiao 2 and Hideo Kaiju 1, 1 Keio Univ., Japan and 2 Brown Univ., USA
2020-22-3	Quantum Conductance Based Mechanical Sensors Fabricated with Closely Spaced Metallic Nanoparticle Arrays	Zhengyan Du, Weifeng Luo, Mingrui Chen, Fei Liu, Bo Xie and Min Han, Nanjing Univ., China
2020-22-4	Light Emission and Polarization Characteristics of AlGaOx Nanowire Prepared by Wet Oxidation of Al-rich AlGaAs Nanowire	Tomoki Sadayasu 1, Jun Natsui 1, Naoki Yamamoto 2, Takumi Sannomiya 2, Fumitaro Ishikawa 1, 1 Ehime Univ. and 2 Tokyo Tech., Japan
2020-22-5	Growth of Vertically Aligned GaAs Nanowire Ensembles by Molecular Beam Epitaxy and Their Transfer to Planar Substrate by Simple Rubbing Method	Koki Okano, Rikuo Tsutsumi, Mitsuki Yukimune and Fumitaro Ishikawa, Ehime Univ., Japan
2020-22-6	Spin Transport Properties in $Ni_{78}Fe_{22}/Mq_3$ (M=Al, Er)/$Ni_{78}Fe_{22}$ Nanoscale Junction Devices Utilizing Magnetic Thin-Film Edges	K. Senshu 1, Y. Sasaki 2, Y. Nakayama 1, T. Misawa 2, T. Komine 3, N. Hoshino 4, T. Akutagawa 4, M. Fujioka 2, J. Nishii 2 and H. Kaiju 1, 1 Keio Univ., 2 Hokkaido Univ., 3 Ibaraki Univ. and 4 Tohoku Univ., Japan
2020-22-7	Combinations of Electrode and Intrinsic Oxygen Vacancy Concentration for Resistive Switching in Tantalum Oxide	Yuanlin Li, Atsushi Tsurumaki-Fukuchi, Masashi Arita and Yasuo Takahashi, Hokkaido Univ., Japan
2020-22-8	Formation and Optical Characteristics of ZnO:Eu/ZnO Nanowires Grown by Sputteringassisted Metalorganic Chemical Vapor Deposition	J. Tatebayashi, M. Mishina, N. Nishiyama, D. Timmerman, S. Ichikawa and Y. Fujiwara, Osaka Univ., Japan
2020-22-9	Dependence of Transport Characteristics of Fe Nanodot Array on The Underlayer Surface	Ikuma Amano, Takayuki Gyakushi, Atsushi Tsurumaki-Fukuchi, Masashi Arita and Yasuo Takahashi, Hokkaido Univ., Japan
2020-22-10	Thickness-Dependent Magnetization Switching in Patterned CoFe Nanolayers on GaAs (001) Substrates	Wei Dai 1, Keigo Teramoto 1, Ryoma Horiguchi 1, Wataru Kanetsuka 2, Masashi Akabori 1 and Shinjiro Hara 1, 1 Hokkaido Univ. and 2 JAIST, Japan
2-2-3: FET, Diode, Sensor, and Memory		
2020-22-11	Enhanced Conducting of Li Doping in NiO Thin Films and Its Application in LED	Sujun Guan 1, Keita Shiraishi 1, Yuri Tamamoto 1, Mikihiro Kato 1, Yun Lu 2 and Xinwei Zhao 1, 1 Tokyo Univ. of Sci. and 2 Chiba Univ., Japan

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2020-22-12	~~Broadband Ultraviolet Photodetector Based on GaN/β-Ga_2O_3 pn Heterojunction with Graphene~~ Withdrawn	~~Chunhong Zeng 1,2, Yongjian Ma 2, Baoshun Zhang 2, Tao He 2, Yuhua Sun 2, Wenkui Lin 2, Qi Cui 2, Xuemin Zhang 2 and Mei Kong 1, 1 Changchun Univ. of Sci. and Technol. and 2 Suzhou Institute of Nano-Tech and Nano-Bionics, China~~
2020-22-13	Potential of $AgBiI_4$ Rudorffites for Indoor Photovoltaic Energy Harvesters in Autonomous Environmental Nanosensors	Ivan Turkevych, Said Kazaoui, Naoki Shirakawa and Nobuko Fukuda, AIST, Japan
2020-22-14	Fabrication and Characterization of Nano-Convex-Embedded Si MOSFET toward Electrical Nanostructure Discrimination	Shintaro Mizuno 1, Renpeng Lu 1, Yosuke Ueba 2, Mikio Ishikawa 2, Mitsuru Kitamura 2, Morihisa Hoga 3 and Seiya Kasai 1, 1 Hokkaido Univ., 2 Dai Nippon Printing and 3 AIST, Japan
2020-22-15	Influence of SiO_x Interlayer on Electrical Properties of Noble Metal-Free ZrO_x-Based Resistive Switching Memory Devices	Keito Toyama, Daiki Naniwa and Shinya Aikawa, Kogakuin Univ., Japan
2020-22-16	GAA Junctionless NMOS Multi-States Anti-Fuse One Time Programmable Memory	Chen-Feng Chang , Chiuan-Huei Shen, Cheng-Chen Lin, Zong-Han Lu and Tien-Sheng Chao, Natl. Chiao Tung Univ., Taiwan
2020-22-17	The Enhancement of Sensitivity and Response Time of PDMS Based Capacitive Force Sensor by Means of Active Layer Modification.	Yasumin Siangkhio, Narin Tammarugwattana, Adirek Rangkasikorn, Navaphun Kayunkid, Sukittaya Jessadaluk, Sakon Rahong, Supamas Wirunchit and Jiti Nukeaw, King Mongkut's Inst. of Technol. Ladkrabang, Thailand
2020-22-18	Nanometer-Scale Temperature Measurement Based on Single-Electron Counting Statistics in a Nanowire Si MOSFET	Kensaku Chida, Akira Fujiwara and Katsuhiko Nishiguchi, NTT, Japan
2-2-4: Device simulation		
2020-22-19	Theoretical Study on Reflectometry Technique for Fast Sensing of an FET Sensor	K. Nishiguchi and A. Fujiwara, NTT, Japan
2020-22-20	Improvement of Self-heating Effect in Ge Vertically Stacked Gate-all-around pMOSFET by Utilizing Al_2O_3 and Its Scaling Behaviors	Young Suh Song 1,2, Jang Hyun Kim 3, Sangwan Kim 4, Garam Kim 5, Hyun-Min Kim 1, Hyunwoo Kim 1, Junsu Yu 1 and Byung-Gook Park 1, 1 Seoul Natl. Univ., 2 Korea Military Academy, 3 Pukyoung Natl. Univ., 4 Ajou Univ. and 5 Myongji Univ., Korea
2020-22-21	Multi-floating-zone JTE for 6.5 kV SiC Power Devices with Exponentially Modulated Dimensions	Junki Jung 1,2, Ogyun Seok 1, Min-Woo Ha 4 and Ho-Jun Lee 2, 1 Korea Electrotechnol. Res. Inst., 2 Pusan Natl. Univ., 2 Kumoh Natl. Inst. of Technol. and 3 Myongji Univ., Korea
2020-22-22	Design of Single-Electron Information-Processing Circuit Modeled on Behavior of Fish Shoals	H. Yamashita and T. Oya, Yokohama Natl. Univ., Japan
2020-22-23	Vertical Stack MIM Diode Design for Optical Rectenna	Takashi Akahane, Keisuke Yanagisawa and You Yin, Gunma Univ., Japan
2020-22-24	Preliminary Study on 3D Bottleneck Barrier Height Minimum Dependence of V_{th} Fluctuated by Ion Implantation to Source and Drain Extensions of SOI Tri-Gate FinFETs	Toshiyuki Tsutsumi, Meiji Univ., Japan
2020-22-25	Simulation Study about Negative Capacitance Effect on Recessed Channel Tunnel Field-Effect Transistor	Shinhee Kim and Sangwan Kim, Ajou Univ., Korea
2020-22-26	Numerical Simulation of p-type Pseudo-Vertical Diamond Schottky Barrier Diode Using Incomplete Ionization Mode	Ogyun Seok 1 and Min-Woo Ha 2, 1 Kumoh Natl. Inst. of Technol. and 2 Myongji Univ., Korea

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2-3: Nanofabrication		
2-3-1: Nanofabrication I		
2020-23-1	Fabrication of The Metal-Semiconductor Nano-Pillar Structure for The Single Photon Emitter	Satoru Odashima and Hirotaka Sasakura, Hokkaido Univ., Japan
2020-23-2	Fabrication of Nano-Capillary Emitter Arrays for Ionic Liquid Electrospray Thrusters	Kanta Suzuki 1,2, Masayoshi Nagao 2, Yongxun Liu 2, Katsuhisa Murakami 2, Sommawan Khumpuang 2,3, Shiro Hara 2, 3 and Yoshinori Takao 1, 1 Yokohama Natl. Univ., 2 AIST and 3 MINIMAL, Japan
2020-23-3	A System for The Fabrication of Metallic Micro/Nanowire Based on Electromigration	Yuta Ito, Yasuhiro Kimura, Yuhki Toku and Yang Ju, Nagoya Univ., Japan
2020-23-4	Fabrication of InAs Quantum Dots on Fused Silica Substrates by Molecular Beam Deposition	Kazumu Sasaki, Yuta Tanaka and Koichi Yamaguchi, Univ. of Electro-Communications, Japan
2020-23-5	Development of Monolithic Liquid Cell for Transmission Electron Microscope Using Minimal Fab Process	Y.X. Liu 1, K. Murakami 1, X. Li 2, K. Nemoto 1, S. Noda 1, H. Tanaka 1, K. Koga 3, S. Khumpuang 1,3, Y. Morita 1, T. Matsukawa 1, S. Hara 1,3, M. Takeguchi 2 and M. Nagao 1, 1 AIST, 2 NIMS and 3 MINIMAL, Japan
2020-23-6	Wet Etching for Isolation of N-polar GaN HEMT Structure by Electrodeless Photo-Assisted Electrochemical Reaction	T. Aota 1, A. Hayasaka 1, I. Makabe 2, S. Yoshida 2, T. Gotow 1 and Y. Miyamoto 1, 1 Tokyo Tech. and 2 Sumitomo Electric, Japan
2020-23-7	Fabrication of Au Nanowire / TiO_2 Core-Shell Array for Visible Light Responsive Photocatalyst	Kaito Oshio 1, Akihiro Katou 1, Takashi Touyama 1, Kosuke Sugawa 1, Shoso Shingubara 2, Tomohiro Shimizu 2, Kouichi Takase 1, 1 Nihon Univ. and 2 Kansai Univ., Japan
2020-23-8	Controlled Anisotropic Silica Etching Using Metal Masks and Hydrofluoric Acid	R. Kirchner 1, V. Neumann 1, F. Winkler 1, C. Strobel 1, S. Völkel 1, D. Kazazis 1, A. Richter 1, J.W. Bartha 1, 1 TU Dresden, Germany and 2 Paul Scherrer Inst., Switzerland
2020-23-9	Structural and Electrochemical Properties of Solution-Growth CoDoped $BiVO_4$ Nanostructures for Energy Storage Applications	Jessada Khajonrit 1, Pinit Kidkhunthod 2, Ornuma Kalawa 1 and Santi Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Synchrotron Light Research Inst., Thailand
2-3-2: Nanofabrication II		
2020-23-10	Magnetic Properties of ZnO Nanoparticles Pulverlized by a Ball Mill	Hiroaki Kato 1, , Yusuke Kiyomi 2, Tomohiro Shimizu 2, Shoso Shingubara 2 and Kouichi Takase 1, 1 Nihon Univ. and 2 Kansai Univ., Japan
2020-23-11	Effect of Mg-Doping on Structural and Electrochemical Properties of $Ni(OH)_2$-Based Nanostructures	Thongsuk Sichumsaeng, Jintara Padchasri and Santi Maensiri, Suranaree Univ. of Technol., Thailand
2020-23-12	Synthesis and Magentic Properties of Egg White Solutionassisted Hydrothermal Groth Magnetite (Fe_3O_4) Nanoparticles	Santi Phumying 1, Somchai Sonsupap 1, Unchista Wongpratat 1, Pinit Kidkhunthod 2 and Santi Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Synchrotron Light Res. Inst., Thailand
2020-23-13	Structure and Magnetic Properties of (Mn, Co)-Doped CeO_2 Nanostructures Growth by Egg White Solution	Panwit Sangkhaoartyon 1, Somchai Sonsupap 1, Supree Pinitsoontorn 2 and Santi Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Khon Kaen Univ., Thailandn
2020-23-14	Synthesis and Electrochemical Properties of Ni-Doped $MnC_{o2}O_4$ Nanoparticles Prepared by a Simple Pan-Solution Route	Ornuma Kalawa 1, Jessada Khajonrit 1, Pinit Kidkhunthod 2, Narong Chanlek 2 and Santi Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Synchrotron Light Res. Inst., Thailand

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2-3-3: Nanofabrication III		
2020-23-15	Emulating The Neural Facilitation Utilizing The Larger Time Constant in The Operation of Molecular-Gap Atomic Switches	Naoya Wada and Tsuyoshi Hasegawa, Waseda Univ., Japan
2020-23-16	Change in The Temperature Dependence of Ag/Ta_2O_5/Pt Gapless-Type Atomic Switches Caused by Desorption/Adsorption of Water Molecules from/into The Ta2O5 Matrix	Maiko Mikami 1, Naoya Tanahashi 1, Tohru Tsuruoka 2 and Tsuyoshi Hasegawa 1, 1 Waseda Univ. and 2 NIMS, Japan
2020-23-17	Comparison of Resistance Change Responses Against Voltage Pulses of Ti/HfOX/Au ReRAM Devices Formed with Different DC Reactive Sputtering Conditions	Masahiro Morimoto, Rintaro Hatanaka, Tomohiro Shimizu, Takeshi Ito and Shoso Shingubara, Kansai Univ., Japan
2020-23-18	Study on a Conductive Channel of a Pt/NiO/Pt ReRAM for Its Use in a Magnetic Field	Yuki Koga and Tsuyoshi Hasegawa, Waseda Univ., Japan
2020-23-19	Three-Dimensional Reservoir Computing Composed of Carbon Nanotube-Polyoxometalate Random Network	Saman Azhari, Deep Banerjee, Shuho Murazoe, Takumi Kotooka, Yusuke Nakao, Yuki Usami and Hirofumi Tanaka, Kyushu Inst. of Technol., Japan
2020-23-20	Electrochemical Controlled Neuromorphic Behavior Based on Self-Doped Polyaniline	Yuki Usami 1,2, Takuya Matsumoto 2, Wilfred G. van der Wiel 3 and Hirofumi Tanaka 1, 1 Kyushu Inst. of Technol., 2 Osaka Univ., Japan and 3 Univ. of Twente, The Netherlands
2020-23-21	A Physical Reservoir System Arising from Dynamical Single-Walled Carbon Nanotube/Porphyrin-Polyoxometalate Complex Random Network	Banerjee Deep 1, Takumi Kotooka 1, Yoshito Yamazaki 2, Takuji Ogawa 2 and Hirofumi Tanaka 1, 1 Kyushu Inst. of Technol. and 2 Osaka Univ., Japan
2020-23-22	Symmetrical and Asymmetrical Threshold Switching Devices Using NbOx Switching Layer with Thin TiN Electrode Layer	R. Hatanaka, M. Morimoto, S. Nakamura, T. Shimizu, T. Ito and S. Shingubara, Kansai Univ., Japan
2020-23-23	Demonstration of Reservoir Computing Using Polyoxometalate /Single-Walled Carbon Nanotube Complex Random Network	Shuho Murazoe 1, Takumi Kotooka 1, Yoshito Yamazaki 2, Takuji Ogawa 2, Hirofumi Tanaka 1, 1 Kyushu Inst. of Technol. and 2 Osaka Univ., Japan
2020-23-24	Temperature Dependence of Silver Selenide Nanowires Network for Reservoir Computing Device	Takumi Kotooka, Yuki Usami and Hirofumi Tanaka, Kyushu Inst. of Technol., Japan
2020-23-25	Study of Time Delay Reservoir Computing Using Nanomaterials	Yusuke Nakao, Yuki Usami, Deep Banargee, Saman Azhari, Takumi Kotooka, Hadiyawarman and Hirofumi Tanaka, Kyushu Inst. of Technol., Japan
2-4: Inorganic Nanomaterials		
2-4-1: Inorganic Nanomaterials I		
2020-24-1	Effect of Low Temperature Buffer Layer on The All-Sputtered Epitaxial GaN/AlN Film on Si (111) Substrate	Takahiro Nagata 1, Yuya Suemoto 2, Yoshihiro Ueoka 2, Masami Mesuda 2, Liwen Sang 1 and Toyohiro Chikyow 1, 1 NIMS and 2 Tosoh, Japan
2020-24-2	Effects of $Zn_xMn_{1-x}S$ Buffer Layer on Nonpolar AlN Growth on Si (100) Substrate	Masaya Morita 1,2, Keiji Ishibashi 2,3, Kenichiro Takahashi 2,3, Toyohiro Chikyow 2, Atsushi Ogura 1 and Takahiro Nagata 2, 1 Meiji Univ., 2 NIMS and 3 COMET, Japan
2020-24-3	Accelerating 2-Dimensional X-Ray Diffraction Measurement and Analysis with Density-Based Clustering for Thin Films	Akihiro Yamashita 1,2, Takahiro Nagata 2, Shinjiro Yagyu 2, Toru Asahi 1 and Toyohiro Chikyow 2, 1 Waseda Univ. and 2 NIMS, Japan

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2020-24-4	Current-Induced Insulator-to-Metal Transition of Ca_2RuO_4 Thin Films Observed in Local Electrical Measurements	Keiji Tsubaki 1, Tenki Ishida 1, Yasuo Takahashi 1, Takayoshi Katase 2, Toshio Kamiya 2, Atsushi Tsurumaki-Fukuchi 1 and Masashi Arita 1, 1 Hokkaido Univ. and 2 Tokyo Tech., Japan
2020-24-5	Investigation of CaF_2 Doping on Electrical and Optical Properties of In_2O_3 Transparent Conductive Film	Kaito Oe and Shinya Aikawa, Kogakuin Univ., Japan
2020-24-6	Magnetic Resonance Scrutiny of Hydrogen Complex Defect in ZnO Nanoparticles: An Integrated EPR and MATLAB Study	Eliyash Ahmed, Santu Mazumder and Kasilingam Senthilkumar, Natl. Inst. of Meghalaya, India
2020-24-7	Structural Analysis and Characterization of Bilayer AZO Thin Film Transistor by Solution Process	Kazuyori Oura, Keisuke Takano, Hideo Wada, Masatoshi Koyama, Toshihiko Maemoto and Shigehiko Sasa, Osaka Inst. of Technol., Japan
2020-24-8	Combination of Laser and e-Beam Lithography for Large Area Submicron Grating-Gate AlGaN/GaN THz Devices	P. Sai 1,2, M. Słowikowski 1,2, M. Filipiak 1,2, P. Wiśniewski 1,2, G. Cywiński 1,2, M. Sakowicz 1, P. Prystawko 1, S. Rumyantsev 1, W. Knap 1,2,3, 1Inst. of High Pressure Physics, 2 Warsaw Univ. of Technol., Poland and 3 Univ. of Montpellier and CNRS UMR, France
2020-24-9	First-Principles Simulation of Strain Response in Two-Dimensional Silicon Carbide Nanolayers	Koichi Nakamura, Kyoto Univ. of Advanced Sci., Japan
2-4-2: Inorganic Nanomaterials II		
2020-24-10	Magneto-Plasmon Resonances on Perpendicular Magnetic Thin Films Consisting of [CoPt/ZnO/Ag] Stacked Nano-Layer	Haruki Yamane, Akita Industrial Technol. Center, Japan
2020-24-11	Comparative Characterization of Si Schottky Solar Cells Using B-Doped In_2O_3 and ITO Transparent Electrodes	Shinya Aikawa, Yoshio Shibata and Yuki Morinaga, Kogakuin Univ., Japan
2020-24-12	Investigation on Electric Double Layer Effect at Lithium Ion Conducting Solid Electrolyte/Electrode Interface	Makoto Takayanagi 1,2, Takashi Tsuchiya 1, Masataka Imura 1, Yasuo Koide 1, Tohru Higuchi 2 and Kazuya Terabe 1, 1 NIMS and 2 Tokyo Univ. of Sci., Japan
2020-24-13	Magnetization Effect of Nano-Ferrofluid Electromagnet Vibration Energy Harvester	Yi-Hsiu Kao 1, Hung-Wei Liu 1, Yue-Kai Weng 1, Ching-Wei Cheng 2 and Yao-Chuan Tsai 1, 1 Natl. Chung Hsing Univ. and 2 Natl. Taichung Univ. of Sci. and Technol., Taiwan
2020-24-14	Visualization of Photocatalytic Activity in Single-, Bilayer, and Hybrid Systems of Inorganic Nanosheets by Ag-Photodeposition	Leanddas Nurdiwijayanto, Shisheng Li, Takayoshi Sasaki and Takaaki Taniguchi, NIMS, Japan
2020-24-15	Electrospun Nanofibers for Enhanced Colorimetric Detection of Hydrogen Sulfide	Junyeop Lee 1,2, DH. Jeong 1, N.G. Do 1,2, J.K. Kim 1,2, Y.S. Kim 1,2, M. Han 1 ,E. Choe 1, N.R. Kim 1, S.H. Kong 2 and Daewoong Jung 1, 1 KITECH and 2 Kyungpook Natl. Univ., Korea
2020-24-16	Thin Film Fabrication and Characterization of Scandia and Yttria Co-Doped ZrO_2 Prepared via Pulsed Laser Deposition	J. Rabo and R.B. Cervera, Univ. of Philippines, Philippines
2-5: Organic Nanomaterials		
2020-25-1	~~Efficient Energy Transfer between Carbon Dots and Water-Soluble Porphyrin Based on Inner-Filter Effect~~ Withdrawn	~~M. Ghali 1,2, Abdelhafez Elkun2, A. Rezk 1,2 and M. Elkhouly 2, 1 Egypt-Japan Univ. of Sci. and Technol. and 2 Kafrelsheikh Univ., Egypt~~

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2020-25-2	Preparation and Characterization of Large-Area Oriented Ribbon-Shaped Floating Films of Conjugated Polymers	Heriyanto Syafutra 1, Nikita Kumari 2, Yuya Shugita 1, Shyam Pandey 2, Min-cherl Jung 1, Hiroaki Benten 1, Manish Pandey 1 and Masakazu Nakamura 1, 1 NAIST and 2 Kyushu Inst. of Technol., Japan
2-6: NanoTool		
2020-26-1	Identification of Gas Mixture by a Single One-Dimensional SnO_2 Gas Sensor Using Convolution Neural Network	Xuesi Li 1, Xianyin Hu 1, Sho Hashimoto 1, Ang Li 1, Reo Kometani 1, Ichiro Yamada 2, Makiko Noma 2, Katsufumi Nakanishi 2, Yusuke Fukuda 2, Kazuyuki Sashida 2, Toshiyuki Takemori 2, Kenichi Maehara 2, Katsuya Ikeda 2, Kenichi Yoshida 2, Yoshio Mita 1 and Shin'ichi Warisawa 1, 1 Univ. of Tokyo and 2 Sindengen Electric Manufacturing, Japan
2020-26-2	Accurate Method for Measuring Oscillation Amplitude of Non-Contact Atomic Force Microscopy in Long-Range Force Region	Keiichi Ueda 1,2, Daiki Katsube 3, Eiichi Inami 4 and Masayuki Abe 2, 1 Tokyo Metropolitan Industrial Technol. Res. Inst., 2 Osaka Univ., 3 Nagaoka Univ. of Technol. and 4 Kochi Univ. of Technol., Japan
2020-26-3	Vibration Spectrum Measurement and Phase-Resolved Image Observation of Nanomechanical Resonators by Helium Ion Microscopy	Masaki Saito 1, Shinichi Ogawa 2,3, Yukinori Morita 2,3, Shin'ichi Warisawa 1,3 and Reo Kometani 1,3, 1 Univ. of Tokyo, 2 AIST and 3 AIST-UTokyo, Japan
2020-26-4	Separation of Short and Long Range Forces of Force Spectroscopy by Monte Carlo Method	Zhuo Diao 1, Daiki Katsube 2, Hayato Yamashita 1 and Masayuki Abe 1, 1 Osaka Univ. and 2 Nagaoka Univ. of Technol., Japan
2020-26-5	Electrical and Optical Characterization of Nanogap Electrodes with an Assembled Gold Nanoparticle Chain	Takayuki Sumitomo, Akihiro Morita, Akio Uesugi, Koji Sugano and Yoshitada Isono, Kobe Univ., Japan
2020-26-6	Growth Direction of VLS Silicon Nanowires with Surface Nanoholes Formed Using MACE	Akio Uesugi, Taiju Horita, Koji Sugano and Yoshitada Isono, Kobe Univ., Japan
3: Nanoimprint, Hybrid-NIL, Biomimetics, and Functional Surfaces		
3-1: Nnanoimprint		
2020-3-1	Superhydrophobic and Superoleophobic Property Enhancement on Guard Ring Micro-Patterned PDMS with Simple Flame Treatment	N. Atthi, W. Sripumkhai, P. Pattamang, R. Meananeatra, P. Saengdee, O. Thongsook, N. Ranron, K. Pankong, W. Uahchinkul, J. Supadech, N. Klunngien and W. Jeamsaksiri, NECTEC, Thailand
2020-3-2	Fabrication of Slippery Liquid-Infused Porous Surfaces for Anti-Biofouling Applications	N. Atthi 1, M. Suwan 2, N. Sangwong 2, P. Pattamang 1, W. Sripumkhai 1, R. Meananeatra 1, P. Saengdee 1, O. Thongsook 1, N. Ranron 1, K. Pankong 1, W. Uahchinkul 1, W. Jeamsaksiri 1 and S. Supothina 2, 1 NECTEC and 2 MTEC, Thailand
2020-3-3	Nanoparticle-Free Ultra-High Refractive Index Polymers in The Visible Wavelength for Nanoimprint Lithography	Carlos Pina-Hernandez 1, Khai Le 1, Arian Gashi 1, Stefano Cabrini 2 and Keiko Munechika 1, 1 HighRI Optics and 2 Lawrence Berkeley Natl. Lab., USA
2020-3-4	Fabrication of Hollow Microneedles with High Aspect Ratio Made of Biodegradable Polymer by Thermal Nanoimprinting	Masato Suzuki 1, Akira Ochi 1, Mimu Yamamoto 1, Shingo Terashima 2, Tomokazu Takahashi 1 and Seiji Aoyagi 1, 1 Kansai Univ. and 2 Waseda Univ., Japan
2020-3-5	Femtosecond-Laser Single-Pulse Development of Cr-Deposited Imprint Resin Patterns	Yusuke Isawa, Takahiro Nakamura, Shunya Ito and Masaru Nakagawa, Tohoku Univ., Japan
2020-3-6	Deformation Analysis of Layer Interface in Multilayer Imprinting	Kazuki Tokumaru and Fujio Tsumori, Kyushu Univ., Japan
2020-3-7	Finite Element Analysis of Multi-Step Imprinting for Hierarchical Structures	Tsuyoshi Miyata, Kazuki Tokumaru and Fujio Tsumori, Kyushu Univ., Japan

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3-2: Biomimetics		
2020-3-8	Fabrication of a Novel Optical Diffuser Inspired by The Morpho Butterfly	Kazuma Yamashita 1, Kentaro Kunitsu 1, Yuji Kuwahara 1,2 and Akira Saito 1,2, 1 Osaka Univ. and 2 RIKEN Spring 8, Japan
2020-3-9	Effects of Surface Functional Groups against Barnacle Settlement	Kei Mikami 1, Ai Momose 1, Takayuki Murosaki 2, Yasuyuki Nogata 3, Yuji Hirai 1, Masatsugu Shimomura 1, 1 Chitose Inst. of Sci. and Technol., 2 Asahikawa Medical Univ. and 3 Central Res. Inst. of Electric Power Industry, Japan
2020-3-10	Effect of Impact Preloading on The Adhesion of Carbon Nanotube Gecko Tapes Against The Collision of Stainless Steel Balls	M. Abe and K. Hirahara, Osaka Univ., Japan
2020-3-11	Microchannel Design for High velocity Liquid Transport	Rikima Kuwada, Taro Yaeo and Daisuke Ishii, Nagoya Inst. of Technol., Japan
2020-3-12	Sinking-Floating Effect on a Bio-Inspired Hydrophilic-Hydrophobic Patterned Surface	Naoya Tagata and Daisuke Ishii, Nagoya Inst. of Technol., Japan
2020-3-13	Control of Antifouling Property and Fluid Resistance by Wettability of Surface Microstructures	Maria Inukai and Daisuke Ishii, Nagoya Inst. of Technol., Japan
2020-3-14	Improvement of Transferability under Cohesive Gas Atmosphere in the Fabrication of Fine Hairs Imitating Gecko	Akira Ochi 1, Mimu Yamamoto 1, Shingo Terashima 2, Tomokazu Takahashi 1, Masato Suzuki 1 and Seiji Aoyagi 1, 1 Kansai Univ. and 2 Waseda Univ., Japan
3-3: Functional Surface		
2020-3-15	Improving Sliding Acceleration of Microdroplet by Using Different Forward and Backward Shapes of Micropillars on a Inclined Surface	Tatsuya Okawa, Yoshihiro Otake and Satomitsu Imai, Nihon Univ., Japan
2020-3-16	Preparation of Diatom Frustules Composite Gels	Yoshiyuki Doi, Yuji Hirai and Masatsugu Shimomura, Chitose Inst. of Sci. and Technol., Japan
2020-3-17	Preparation of Cellulose Nanocrystal/Chitosan Composite Multi-Functional Films	Kazuma Tsujioka, Yuji Hirai and Masatsugu Shimomura, Chitose Inst. of Sci. and Technol., Japan
2020-3-18	Fabrication of Metal Microstructures by Self-Organization and Electroforming	Masanaru Nosaka, Yuji Hirai and Masatsugu Shimomura, Chitose Inst. of Sci. and Technol., Japan
2020-3-19	In-Situ Observation of Water Adsorption on Rutile TiO_2(110)-(1x2) Surface at Room Temperature by Scanning Tuuneling Microscopy	Li Fengxuan 1, Daiki Katsube 2, Eiichi Inami 3, Hayato Yamashida 1 and Masayuki Abe 1, 1 Osaka Univ. 2 Nagoya Univ. of Technol. and 3 Kochi Univ., Japan
2020-3-20	The Modification Selective Electrode Based on Magnetic Molecularly Imprinted Polymer for Bisphenol A Determination	Piyawan Leepheng, Dalawan Limthin, Koson Trachu and Darinee Phromyothin, King Mongkut's Inst. of Technol. Ladkrabang, Thailand
4: BioMEMS, Lab on a Chip, and Nanobiotechnology		
2020-4-1	Development of Amicrofluidic Device for Cell Separation Using Field-Flow Fractionation	Shinya Ohta 1, Satoshi Takezawa 1, Takeshi Nakamura 2, Yasuhiko Uchibori 2, Shinsuke Taki 1 and Masaki Yamaguchi 1, 1 Shinshu Univ. and 2 Citizen Finedevice, Japan

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2020-4-2	Portable Particle Sorting Device Based on Digital Microfluidics Utilizing Micropillars	Jae Yong Lee, Soon Yeol Kwon, Dong Geon Jung, Seung Deok Kim, Yu Seong Kim and Seong Ho Kong, Kyungpook Natl. Univ., Korea
2020-4-3	Development of Lab-on-a-disc for Antibiotic Residue Detection in Raw Milk	P. Saengdee 1, N. Atthi 1, P. Chamnan 2, W. Sripumkhai 1, P. Pattamang 1, O. Thongsook 1, R. Meananeatra 1, N. Ranron 1, K. Pankong 1, W. Uahchinkul 1, W. Jeamsaksiri 1, K. Vongkamjan 2, 1 NECTEC and 2 Prince of Songkla Univ., Thailand
2020-4-4	Operation Sequence Acquisition for Micro Peristaltic Pump by Q-learning	Takaaki Abe , Shinsuke Ohhara and Yoshiaki Ukita, Univ. of Yamanashi, Japan
2020-4-5	Shape Prediction of Nanoparticles in Liquid by Light Scattering Measurements and Deep Learning Analysis of Brownian Motion	Hiroaki Fukuda 1, Hiromi Kuramochi 1, Hiroaki Takehara 1,2 and Takanori Ichiki 1,2, 1 Univ. of Tokyo and 2 iCONM, Japan
2020-4-6	Phosphocholine Ligands Target Tumor Cell Mitochondria in Vivo	Taehun Hong 1, Takuya Miyazaki 2, Eger Rigte Boonstar 1, Kazunori Igarashi 1, Noriko Nakamura 1, Yasuhiro Nakaga 1,3, Yu Matsumoto 1, Tatsuya Yamasoba 1 and Horacio Cabral 1, 1 Univ. of Tokyo, 2 Kanagawa Inst. of Industrial Sci. and Techno. and 3 Tokyo Tech., Japan
2020-4-7	High-Efficient Intracellular Delivery of Versatile Molecules Through Artificial Tunneling Nanotube Membrane	Kazuhiro Oyama, Zheng Dinuo, Zhang Bowen and Takeo Miyake, Waseda Univ., Japan
2020-4-8	Velocity and Direction Control of Gliding Microtubules by Using Photosensitive Composite	K. Ise, T. Nakahara and K. Minami, Yamaguchi Univ., Japan
2020-4-9	PCBM-Embedded Bilayer Lipid Membranes Electrically Evaluated Using Sequential Measurements of Photo-Induced Current and Electrochemical Impedance Spectroscopy	Haruka Hirata 1, Yasutaka Tomioka 1, Masataka Moriya 1, Hiroshi Shimada 1, Fumihiko Hirose 2 , Ayumi Hirano-Iwata 3 and Yoshinao Mizugaki 1, 1 Univ. of Electro-Communications, 2 Yamagata Univ. and 3 Tohoku Univ., Japan
2020-4-10	Surface Characterization of Poly (L-lactic acid) Substrate with Oxygen Plasma Treatment and Its Application to Metal Thin-Film Formation	Kota Naito 1, Hiroaki Takehara 1,2, and Takanori Ichiki 1,2, 1 Univ. of Tokyo and 2 iCONM, Japan
2020-4-11	High Energy Harvester from Body Fluids Using Enzyme/Carbon Nanotube Composite Fibers for Wearable Applications	Sijie Yin, Xiaohan Liu and Takeo Miyake, Waseda Univ., Japan
5: Microsystem Technology and MEMS		
5-1: Microsystem Technology and MEMS I		
2020-5-1	Micro Hexapod Robot for Swarm Applications Assembled from One FPC Sheet	K. Asamura, and S. Nagasawa, Shibaura Inst. of Technol., Japan
2020-5-2	A Mode Localized Tilt Sensor with Ultra-Small Stiffness Spring	Zhiqiang Chen and Tamio Ikehashi, Waseda Univ., Japan
2020-5-3	Fabrication of Antireflection Subwavelength Gratings on a Silicon Prism for Improvement of THz Light Extraction Efficiencies	Yuya Naito 1, Atsuki Kosugi 1, Ying Huang 1, Yuma Takida 2, Hiroaki Minamide 2, Kazuhiro Hane 1 and Yoshiaki Kanamori 1, 1 Tohoku Univ. and 2 RIKEN, Japan
2020-5-4	Investigation of Anomalous Nernst Effect toward Thin Flexible Temperature Sensor	Yuichiro Kurokawa, Masahiro Fujimoto and Hiromi Yuasa, Kyushu Univ., Japan

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2020-5-5	Characterization of an Electrode-type Tactile Display Using Electrical and Electrostatic Stimuli	S. Komurasaki 1, H. Kajimoto 2, F. Shimokawa 1, and H. Ishizuka 3, 1 Kagawa Univ., 2 Univ. of Electro-Communications and 3 Osaka Univ., Japan
2020-5-6	Liquid Metal Based Tactile Sensor with Vertically Embedded Narrow Microchannel	Yuki Hashimoto, Tatsuya Usui, Hiroki Ishizuka, Sei Ikeda and Osamu Oshiro, Osaka Univ., Japan
2020-5-7	A Micromirror Driven by Electromagnetic Force for Fourier Transform Infrared Spectroscopy	Chuan-Hui Ou, Nguyen Van Toan and Takahito Ono, Tohoku Univ., Japan
2020-5-8	Microfabricated Vapor Cells with Monolithically Integrated Alkali Metal Dispensing Component	S. Kiyose 1, Y. Hirai 1, O. Tabata 1,2, and T. Tsuchiya 1, 1 Kyoto Univ. and 2 Kyoto Univ. of Advanced Sci., Japan
2020-5-9	Development of Probe-Shaped Pressure Sensor Device for Measuring Pressure Drop at Airway in Lung	Y. Kawamoto 1, Y. Maeda 1, Y. Hasegawa 1, M. Miyoko 2, T. Kawabe 2, and M. Shikida 1, 1 Hiroshima City Univ. and 2 Nagoya Univ., Japan
2020-5-10	Stacked Electrostatic Angle Sensor Implemented in Micro Robot Leg Joints	T. Hara, Y. Nagata and S. Nagasawa, Shibaura Inst. of Technol., Japan
2020-5-11	Highly Expandable Gel Actuator Dispersed with Microdroplets	Haruna Takahashi and Fujio Tsumori, Kyushu Univ., Japan
5-2: Microsystem Technology and MEMS II		
2020-5-12	Pore Size and Shape Dependences on Quasi-Static Tensile Characteristics of Sintered Silver Films	Keisuke Wakamoto 1,2, Takukazu Otsuka 1, Ken Nakahara 1 and Takahiro Namazu 2, 1 ROHM and 2 Kyoto Univ. of Advanced Sci., Japan
2020-5-13	Development of Stent Sensor Device with Protective Biodegradable Shell Structure	H. Noma 1, Y. Hasegawa 1, M. Matsushima 2, T. Kawabe 2 and M. Shikida 1, 1 Hiroshima City Univ. and 2 Nagoya Univ., Japan
2020-5-14	Shape Comparison in Alumina and Silica Porous Nanoparticles	Yuga Kumakiri, Michiko Shindo and Takahiro Namazu, Kyoto Univ. of Advanced Sci., Japan
2020-5-15	Determination of the Piezoresistive Coefficient of β-Ga_2O_3 in <010> Direction Using Numerical Analysis	Naoki Takahashi, Takaya Sugiura, Ryohei Sakota and Nobuhiko Nakano, Keio Univ., Japan
2020-5-16	Effect of Molten Salt Reduction on Exothermic Characteristics of Titanium/Reduced-Silica Nanoparticles	Michiko Shindo 1, Yuga Kumakiri 1, Ryosuke Terasawa 2 and Takahiro Namazu 1, 1 Kyoto Univ. of Advanced Sci. and 2 Aichi Inst. of Technol., Japan
2020-5-17	Crystallite Size Analysis of Al/Ni Multilayer Powder by Synchrotron Radiation X-Ray Diffraction	Souto Yamashita, Rino Yamamoto and Shugo Miyake, Kobe City College of Technol., Japan
2020-5-18	Bilayer Thickness Dependency on Exothermic Reaction Timing Difference in Al/Ni Multilayer Film by Laser-Induced Multiple Ignition	Kana Maekawa 1,2, Kenta Kodama 2 and Takahiro Namazu 2, 1 Aichi Inst. of Technol. and 2 Kyoto Univ. of Advanced Sci., Japan
2020-5-19	Evaluation of Mems Thermal Flow Sensor in Medical Drip Infusion System	Chihiro Shimohira 1, Yoshihiro Hasegawa 1, Miyoko Matsushima 2, Tsutomu Kawabe 2 and Mitsuhiro Shikida 1, 1 Hiroshima City Univ. and 2 Nagoya Univ., Japan

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2020-5-20	Room-Temperature Wafer Bonding of $LiNbO_3$ and Si Using Surface Activation Process with Self-Sputtering	Kaname Watanabe and Ryo Takigawa, Kyushu Univ., Japan
2020-5-21	Non-Invasive Heart Rate Measurement System for Husbandry Training of Parguma Larvata	Hirofumi Nogami 1, Satoru Ohgata 1, Aya Saito 2, Kazuyuki Ban 2,3, Takumi Hiejima 1 and Ryo Takigawa 1, 1 Kyushu Univ., 2 Oomuta City Zoo and 3 Morioka Zoological Park, Japan
5-3: Microsystem Technology and MEMS III		
2020-5-22	Tensile Strength of Single-Crystal Silicon Microstructure with Stepwise Bias-Graded a-C:H Coating	Yuanlin Xia, Yoshikazu Hirai and Toshiyuki Tsuchiya, Kyoto Univ., Japan
2020-5-23	Ionic Liquid Electrospray Thrusters with Uniform Needle-Emitter Arrays for Precise Thrust Control	Fumiya Tachibana 1, Toshiyuki Tsuchiya 2 and Yoshinori Takao 1, 1 Yokohama Natl. Univ. and 2 Kyoto Univ., Japan
2020-5-24	Development of Spear-Shaped Tip-Separable Microneedle Device with Guide Tube for Trans-Dermal Drug Delivery System	Mizuki Sakamoto, Yoshihiro Hasegawa and Mitsuhiro Shikida, Hiroshima City Univ., Japan
2020-5-25	Raman Spectroscopy of Electron-Beam-Induced Silicon Nanocrystals in Silicon Oxide Film	Shingo Kammachi and Takahiro Namazu, Kyoto Univ. of Advanced Sci., Japan
2020-5-26	Miniaturized Liquid Pouch Motors Using Flexible Liquid Metal Heater	T. Usui 1, H. Ishizuka 1, T. Hiraki 1,2, Y. Kawahara 2, S. Ikeda 1 and O. Oshiro 1, 1 Osaka Univ. and 2 Univ. of Tokyo, Japan
2020-5-27	Fabrication of a Stretchable Plasmonic Nanosheet for Dynamic Color Tuning	Fumitaka Endo 1, Hayato Kumagai 1, Toshinori Fujie 2, Kazuaki Sawada 1 and Kazuhiro Takahashi 1, 1 Toyohashi Univ. of Technol. and 2 Tokyo Tech., Japan
2020-5-28	Active Control of Surface by Magnetic Pillar Arrays	Suparat Gaysornkaew and Fujio Tsumori, Kyushu Univ., Japan
2020-5-29	Melting Behavior of Thermoplastic Polymer for 3D Self-Folding	R. Zhang, A. Richter and R. Kirchner, Technical Univ. Dresden, Germany
2020-5-30	Development of 3D Printer for Magnetic Soft Actuator Using Dispensing System	Reynaldi Tjahjadi and Fujio Tsumori, Kyushu Univ., Japan
2020-5-31	Electrostatic Actuator Driven by Commercial Type Wireless Power Supply	T. Tsuchida and S. Nagasawa, Shibaura Inst. of Technol., Japan
6: Atomic Layer Processing (ALP)		
2020-6-1	Influence of Adsorbed O_2 on The Gate-Bias Stress Stability of Back-Gate-Type TFT with Carbon-Doped In_2O_3 Channel	Riku Kobayashi 1,2, Toshihide Nabatame 2, Takashi Onaya 1,2,3, Akihiko Ohi 2, Naoki Ikeda 2, Takahiro Nagata 2, Kazuhito Tsukagoshi 2 and Atsushi Ogura 1,4, 1 Meiji Univ., 2 NIMS, 3 JSPS Res. Fellow, 4 Meiji Renewable Energy Lab., Japan