

Poster program

- P001* *Shear-Induced Crystallization of Polypropylene Containing Talc Particles with Different Shapes*, Shion Kitabatake¹, Khunanya Janchai¹, Masayuki Yamaguchi¹ (¹ Graduate School of Advanced Science and Technology, Japan Advanced Institute of Science and Technology, Nomi, Japan)
- P002* *Effect of Long-Chain Branched High-Density Polyethylene on Flow-Induced Crystallization of Polypropylene*, Tatsuki Inaoka¹, Masayuki Yamaguchi¹, Takaaki Hattori² (¹ Japan Advanced Institute of Science and Technology, 11, Asahidai, Nomishi, Ishikawa 9231292, Japan, ² Japan Polyethylene Corporation, 232, Yako, Kawasakiku, Kawasakishi, Kanagawa 2108548, Japan)
- P003 *in-situ CT Observation of Interfacial Fracture Processes and Strain–Stress Distribution in Al–Adhesive Joint*, Takanori Itoh¹, Norio Saito¹, Masayuki Inaba¹, Chulho Song¹, Akihisa Takeuchi², Masayuki Uesugi², Yuki Sada^{2,3}, Hiroyuki Toda³ (¹ NISSAN ARC, LTD., ² SPring8/JASRI, ³ Kyushu Univ.)
- P004 *Observation of Fracture Behavior and Nanoscale Mechanical Characterization in Al-Structural Adhesive*, Emi Mukai¹, Kenichi Ueoka¹, Toshinori Hasegawa¹, Norio Saito¹, Chulho Song¹, Takanori Ito¹ (¹ NISSANARC, LTD., Yokosuka, Kanagawa, Japan)
- P005* *Effect of CNF Addition on Crystallization and Crack Propagation in Natural Fiber Reinforced PLA Composites*, Hiroki Ujihara¹, Seiji Mitsubayashi², Kenichi Takemura², Koki Matsumoto³ (¹ Graduate school of Engineering, Kanagawa University, Yokohama, Japan, ² Department of Mechanical Engineering, Kanagawa University, Yokohama, Japan, ³ Department of Mechanical and Control Engineering, Kyushu Institute of Technology, Kitakyushu, Japan)
- P006 *Enhanced Injection Molding Quality Prediction Using Attention-assisted Gated Recurrent Unit Neural Network*, Po-Kai Fan¹, MingShyan Huang¹ (¹ Department of Mechatronics Engineering, National Kaohsiung University of Science and Technology, Kaohsiung City, Taiwan)
- P007* *Effect of Compatibilizer Addition on the Structure and Properties of Polylactic Acid/Thermoplastic Starch Fibers*, Ryo Okamoto¹, Yuta Saiki¹, Ren Tomisawa¹, Wataru Okumura¹, Wataru Takarada¹, KyoungHou Kim^{1,2}, Yutaka Ohkoshi^{2,3} (¹ Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan, ² Institute for Fiber Engineering and Science (IFES), Shinshu University, Nagano, Japan, ³ Advanced Technology Institute, Osaka Gas, Osaka, Japan)
- P008* *Retention and Recovery of High Orientation in Isotactic Polypropylene: The Role of Melt-Memory during Cooling*, Guojuan XU¹, Masayuki Yamaguchi¹ (¹ Japan advanced institute of science

and technology)

P009 *The effect of surface renewal on the dissolution of physical blowing agents in low-pressure foam injection molding process.* Akihiro Naito¹, Yuta Hikima², Masahiro Ohshima² (¹ Injection Molding Machinery Engineering Department, Hiroshima Plant, The Japan Steel Works, Ltd., Hiroshima City, Japan, ² Department of Chemical Engineering, Kyoto University, Kyoto City, Japan)

P0010* *Improvement of Position Control Performance in a Hydraulic Injection Molding Machine Using a Resonant Filter and Loop Shaping,* Takahiro Shinpuku¹, Ryo Akai¹, Shota Yabui¹, Kento Fujita², Yusuke Uematsu², Shota Suzuki², Yusuke Uchiyama² (¹ Robotics and Mechatronics Laboratory, Department of Mechanical Systems Engineering, Tokyo City University, Tokyo, Japan, ² Research and Development Center, MAZIN Inc., Tokyo, Japan)

P0011* *Application of Automatic Data-Driven Control for Injection Speed Control in Hydraulic Injection Molding Machines,* Ryo Akai¹, Takahiro Shinpuku¹, Shota Yabui¹, Kento Fujita², Yusuke Uematsu², Shota Suzuki², Yusuke Uchiyama² (¹ Robotics and Mechatronics Laboratory, Department of Mechanical Systems Engineering, Tokyo City University, ² Research and Development Center, MAZIN Inc., Tokyo, Japan)

P0012* *Sensor-Based Optimization of the Injection Molding Process Using a Multiple-Input and Multiple-Output Artificial Neural Network,* JiWoo Kim¹, JongSun Kim¹ (¹ Digital Manufacturing Division, Korea Institute of Industrial Technology(KITECH), Gyeonggi-do, South Korea)

P0013 *Development of Directly Joined Metal–Plastic Automotive Components Using LAPM and NMT,* JongSun Kim¹ (¹ Digital Manufacturing Division, Korea Institute of Industrial Technology (KITECH), Gyeonggi-do, South Korea)

P0014 *Development of a Sensor Add-on Mold Component and Signal Preprocessing Module for Injection-Stretch Blow Molding,* EuiChul Jeong¹, HyunSeung Lee¹, JungGil Oh², SeokKwang Hong¹ (¹ Digital Manufacturing Division, KITECH, Bucheonsi, South Korea ² DongA Precision, Bucheonsi, South Korea)

P0015* *Effect of Spinning Speed on the Higher-Order Structure Development in Poly (ethylene terephthalate) Fibers,* Yuki Tanimoto¹, Ren Tomisawa¹, KyoungHou Kim^{1,2}, Yutaka Ohkoshi², Shigetoshi Maekawa³, Hiroo Katsuta³, Kazuyuki Okada^{4,5} (¹ Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan, ² Institute for Fiber Engineering and Science (IFES), Shinshu University, Nagano, Japan, ³ Material Science Laboratories, Toray Research Center, Inc., Shiga, Japan, ⁴ Fibers and Textiles Research Laboratories, Toray, Shizuoka, Japan, ⁵ Kyoto University, Kyoto, Japan)

- P0016 *Measurement of plastic film surface temperature by the zero-dimension method*, Yutaro Itagaki¹, Kentaro Taki² (¹ Shibaura Machine Co., Ltd., Extrusion Machine Engineering Department, Numazu, Japan, ² Kanazawa University, Kanazawa, Japan)
- P0017* *Effect of carbon resources on relationships between intrinsic strength and diameter of carbon fiber*, Tatsuro Murakami¹, Wataru Takarada¹, KyoungHou Kim^{1,2}, Yutaka Okoshi² (¹ Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan, ² Institute for Fiber Engineering and Science (IFES), Shinshu University, Nagano, Japan)
- P0018 *Manufacturing Technology of Split-Cross-Section Spunbond Nonwoven Fabrics and Evaluation of Filtration Performance*, Do Kun Kim¹ (¹ Textile Innovation R&D Department, Korea Institute of Industrial Technology (KITECH), Ansansi, Korea)
- P0019* *Enhanced Marine Degradation Properties of Poly(epsilon-caprolactone) Films Based on Blending with Hydrophilic Hyperbranched Polymers*, Ryo Kawamoto¹, Hironori Taguchi², Takako Kikuchi², Hirofumi Hinata³, Shotaro Nishitsuji¹, Hiroshi Ito^{1,4}, Hisao Matsuno¹ (¹ Department of Organic Materials Science, Yamagata University, Yonezawa, Yamagata, Japan, ² Chemicals Evaluation and Research Institute, Japan, Sugito, Saitama, Japan, ³ Department of Science and Engineering, Ehime University, Matsuyama, Ehime, Japan, ⁴ Research Center for GREEN Materials and Advanced Processing, Yamagata University, Yonezawa, Yamagata, Japan)
- P0020* *Effect of spinning and drawing conditions on properties of drawn fibers of Syndiotactic Polystyrene*, Shoei Ichimiya¹ (¹ Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan)
- P0021 *Study of High-Speed Melt-Spun TLCP/PA6 Island-in-the-Sea Bicomponent Fibers for Ultrafine TLCP Fiber Formation*, Do Kun Kim¹, Kyu Il Lee^{1,2}, Su Han Kim^{1,2}, Wangyu Hahm¹ (¹ Textile Innovation R&D Department, Korea Institute of Industrial Technology (KITECH), Ansansi, Korea, ² Department of Fiber System Engineering, Dankook University, Yonginsi, Korea)
- P0022 *Development of Spinnability and Properties of PP/HMW-PET Sheath-Core Bicomponent Fibers in High-Speed Melt Spinning Process*, Jong Hyuk Bae¹, Do Kun Kim¹, Su Han Kim^{1,2}, Kyu Il Lee^{1,2}, WanGyu Hahm¹ (¹ Textile Innovation R&D Department, Korea Institute of Industrial Technology (KITECH), Ansansi, Korea, ² Department of Fiber System Engineering, Dankook University, Yonginsi, Korea)
- P0023 *Development of depolymerization and purification processes for PET textile waste toward a fiber-to-fiber recycling loop*, Jong Hyuk Bae¹, Do Kun Kim¹, WanGyu Hahm¹ (¹ Textile Innovation R&D

Department, Korea, ² Institute of Industrial Technology (KITECH), Ansansi, Korea)

P0024 *Development of Eco-friendly PET Security Fibers with Near-Infrared Fluorescent Ceramic Particles for Traceability Enhancement*, Do Kun Kim¹, Jong Hyuk Bae¹, WanGyu Hahm¹ (¹ Textile Innovation R&D Department, Korea Institute of Industrial Technology (KITECH), Ansansi, Korea)

P0025* *Adhesion Property with Poly (vinyl alcohol) glue for Isosorbide-Based Polycarbonate*, RUIQI HAN¹, Masayuki Yamaguchi¹, (¹ Japan Advanced Institute of Science and Technology, 11 Asahidai, Nomi 9231292, Japan)

P0026* *Effect of high-pressure press on mechanical properties and crystalline structure of polybutylene succinate*, Hiroki Miyakawa¹, Shotaro Nishitsuji¹, Hiroshi Ito¹, Atsushi Kusuno² (¹ Graduate School of Organic Material Science Yamagata University, Japan, ² Mitsubishi Chemical Corporation, Japan)

P0027* *Role of Ethylene-Vinyl Acetate Copolymer in Enhancing Shear-Induced Crystallization of Poly(Lactic Acid)*, RUIQI FENG¹, MASAYUKI YAMAGUCHI¹ (¹ Japan Advanced Institute of Science and Technology, 11 Asahidai, Nomi 9231292, Japan)

P0028* *Tensile Fracture of Polyethylene at High Strain Rates*, Ryoma Moriyama¹, Asae Ito¹, Kohhei Nitta¹, Hiroyuki Yamada², Takumitsu Kida³, Masahiro Higuchi¹, Yusuke Hiejima¹ (¹ Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa, Japan, ² Department of Mechanical Engineering, National Defense Academy, Yokosuka, Japan, ³ Department of Materials Chemistry, School of Engineering, The University of Shiga Prefecture, Hikone, Japan)

P0029* *Effect of Spherulite Size on Acid Solvent Resistance of Crystalline Polyolefins*, Miyume Awano¹, Takumitsu Kida¹, Hiroki Takeshita¹, Katsuhisa Tokumitsu¹, Yuka Kita², Shingo Okuno² (¹ The University of Shiga Prefecture, Department of Materials Chemistry, School of Engineering, 2500 Hassakacho, Hikone, Shiga, Japan, ² Daikin Industries, Ltd. 11, NishiHitotsuya Settsu, Osaka Japan)

P0030* *Effect of Shear-Flow Time on Flow-Induced Crystallization Behavior of High-Density Polyethylene*, Naoki Uenishi¹, Takumitsu Kida¹, Hiroki Takeshita¹, Katsuhisa Tokumitsu¹ (¹ The University of Shiga Prefecture, Department of Materials Chemistry, School of Engineering, 2500 Hassaka, Hikone, Shiga, Japan)

P0031* *Morphological changes during thermal exposure of iPP prepared by different crystallization conditions evaluated by Raman spectroscopy*, Kento Kitamura¹, Takumitsu Kida¹, Hiroki Takeshita¹, Katsuhisa Tokumitsu¹ (¹ Department of Materials Chemistry, The University of Shiga Prefecture, Hikone, Japan)

- P0032* *The Impact of Gamma-ray Irradiation Crosslinking on the Fatigue Life of Polyolefins*, Shuji Tanaka¹, Hiroki Takeshita¹, Takumitsu Kida¹, Katsuhisa Tokumitsu¹, Akira Idesaki², Takahiro Nagahama³, Takashi Kamitanaka⁴ (¹ Department of Materials Science, The University of Shiga Prefecture, Shiga, Japan, ² Takasaki Institute for Advanced Quantum Science, National Institutes for Quantum Science and Technology, Takasaki, Japan, ³ Northeastern Industrial Research Center of Shiga Prefecture, Nagahama, Japan ⁴ Industrial Research Center of Shiga Prefecture, Ritto, Japan)
- P0033* *Relationship between Molecular Aggregation Structures and Thermo-oxidative Degradation Behaviors of Polypropylene Film Surfaces*, Yuto Tsuruya¹, Shotaro Nishitsuji¹, Yutaka Kobayashi², Yasuhiko Otsuki², Hiroshi Ito^{1,2}, Hisao Matsuno¹ (¹ Department of Organic Materials Science, Yamagata University, Yonezawa, Yamagata, Japan, ² Research Center for GREEN Materials and Advanced Processing, Yamagata University, Yonezawa, Yamagata, Japan)
- P0034 *A Molecular Dynamics Simulation Study on Interfacial Slip and Rheology of Immiscible Polymer Blends*, Takeshi Sato¹, Kenji Yoshimoto¹, Kentaro Taki² (¹ Advanced Manufacturing Technology Institute, Kanazawa University, Kanazawa, Ishikawa, Japan, ² School of Frontier Engineering, College of Science and Engineering, Kanazawa University, Kanazawa, Ishikawa, Japan)
- P0035* *Visualization and Quantitative Evaluation of Pore Shapes in Polyvinyl Chloride Foam Using X-ray CT*, Aiko Sato¹, Kosei Nakamura¹, Ren Tomisawa¹, Wataru Takarada¹, KyoungHon Kim^{1,2}, Yutaka Okoshi² (¹ Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan, ² Institute for Fiber Engineering and Science (IFES), Shinshu University, Nagano, Japan)
- P0036* *Microplastic Formation from Photo-Degraded Polypropylene: Size Distribution Transition and Fracture Mechanism*, Kazuya Harema¹, Takumitsu Kida², Yusuke Koide¹, Takato Ishida¹, Takashi Uneyama¹, Yuichi Masubuchi¹ (¹ Department of Materials Physics, Nagoya University, Nagoya, Japan, ² Department of Materials Chemistry, Faculty of Engineering, The University of Shiga Prefecture, Hikone, Japan)
- P0037 *Mechanochromic response of polycarbonate doped with an aggregation-induced emission dye*, Haruka Sasaki¹, Asae Ito¹, Kohhei Nitta¹, Yusuke Hiejima¹ (¹ Kanazawa University)
- P0038* *Quantitative evaluation of fatigue processes in various polymer materials under cyclic deformation*, Tatsuki Tsukuba¹, Asae Ito¹, Kohhei Nitta¹, Yusuke Hiejima¹ (¹ Kanazawa University)
- P0039* *Effect of Physical Aging on Scratch Properties of Polycarbonate*, Takato Suzuki¹, Shotaro Nishitsuji¹, Hiroshi Ito² (¹ Yamagata University, Nishitsuji Lab, Yonezawa, Japan, ² Yamagata University, Ito Lab, Yonezawa, Japan)

- P0040 *Evaluation of Dual Curing Initiators by Photo Rheometer*, Shinnosuke Nagasaki¹, Ayase Yokota¹, Takeshi Sato¹, Kenji Yoshimoto¹, Kentaro Taki¹ (¹ Kanazawa University)
- P0041 *Evaluation of a photo polymerization process using dual-curing initiators by real-time FT-IR*, Ayase Yokota¹, Takeshi Sato¹, Kenji Yoshimoto¹, Kentaro Taki¹ (¹ Kanazawa University)
- P0042* *The Influence of Polymer Brushes Synthesized on Silica Particles on Bubble Nucleation*, Taisei Ito¹, Koji Ohno², Sharma Rajesh Kumar¹, Takeshi Sato¹, Kenji Yoshimoto¹ (¹ Kanazawa University, ² Osaka Municipal University)
- P0043* *The effect of talc addition on bubble nucleation in molten polypropylene revealed by visualization foaming experiments*, Haotian Zheng¹, Hideo Akimoto², Hisahiro Tanaka³, Masato Goto³, Takeshi Sato¹, Kenji Yoshimoto¹, Kentaro Taki¹ (¹ Kanazawa University, ² Akimoto Consulting Office, ³ SAEILO JAPAN)
- P0044 *Visualization of flow instabilities in a slot-die coating process*, Keigo Sato¹, Koki Inose², Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University, ² HIRANO TECHSEED)
- P0045* *Real-Time Monitoring of the Drying Process of Wet Materials in a Convection Oven*, Hyuga Miyamura¹, Takanobu Hira², Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University, ² HIRANO TECHSEED)
- P0046* *Development of numerical model considering the cooling rate in temperature-induced phase separation*, Kosei Kita¹, Kenji Yoshimoto¹, Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University)
- P0047* *Effects of Periodic Fluctuations in Feed Rate and Screw Configuration on Head Pressure, AE Signals, and Extrudate Output in a Twin-Screw Extruder*, Soma Yamada¹, Itsuki Yoshikawa³, Masatoshi Ohara², Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University, ² SHIBAURA MACHINE, ³ Kyoto University)
- P0048* *Kinetic Study of Gas Generation in Stimuli-Responsive Foaming Polymer (PtBOS) for Controlled Debonding of Composites*, Issei Iwataki¹, haruyuki Okamura², Sharma Rajesh Kumar¹, Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University, ² Osaka Municipal University)
- P0049* *Modeling of Photodecomposition Reactions as Stochastic Processes and Analysis of Statistical Fluctuations*, Soma Tachibana¹, Kenji Yoshimoto¹, Takeshi Sato¹, Kentaro Taki¹ (¹ Kanazawa University)
- P0050* *Production of direct joining specimens of metal and resin by the fused filament lamination (FFF) method*, Soma Kojitani¹, Sharma Rajesh Kumar¹, Takeshi Sato¹, Kenji Yoshimoto¹, Kentaro Taki¹

(¹ Kanazawa University)

P0051 *Development and Characterization of Plant-Derived Polyamide 56 Fibers in High-Speed Melt Spinning Process*, Do Kun Kim¹, Jung Nam Im¹ (¹ Textile Innovation R&D Department, Korea Institute of Industrial Technology (KITECH), Ansan-si, Korea)

P0052 *Improved Fiber Orientation Prediction in Reinforced Crystalline Polymers Using a Pressure- and Crystallization-Dependent Herschel–Bulkley–Cross Model*, Motonori Nakai¹, Masaki Yoshii¹, Masato Goto¹, Masahiro Seto², Masashi Yamabe² (¹ SAEILO Japan inc., System-Dep, Kasukabe-city, Saitama, Japan, ² Kanazawa Institute of Technology, Department of Mechanical Engineering, Nonoichi-city, Ishikawa, Japan)¹

P0053 *Automated Image-Analysis Framework for Bubble Morphology in Foamed Injection-Molded Polymers Optimized Using a Genetic Algorithm*, Seonggyun Jeong¹, Masato Goto¹, Motonori Nakai¹ (¹ SAEILO Japan inc. System-Dep Kasukabe-city, Kasukabe, Japan)

P0054 *A Cure-Dependent Viscosity Model for High-Fidelity Flow Simulation of Highly Filled Epoxy Molding Compounds*, Masato Goto¹, Motonori Nakai¹, Masaki Yoshii¹ (¹ SAEILO Japan inc. System-Dep Kasukabe-city, Kasukabe, Japan)

P0055 *Thermal Degradation Behavior of Polyethylene Evaluated by Raman Microscopy*, Takumitsu Kida¹, Hiroki Takeshita¹, Katsuhisa Tokumitsu¹ (¹ Department of Materials Chemistry, The University of Shiga Prefecture, Hikone, Japan)