

List of selected projects for General Collaborative Research Project 2026, IFS, Tohoku University (as 1st April, 2026)

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J26I001	The Influence of the Geometric Characteristics of the Airway Shape on Droplet Generation during Coughing	Fei Jiang	Yamaguchi University	Hitomi Anzai	Institute of Fluid Science
J26I002	Large-Scale Numerical Analysis of the Intermembrane Electrical System in Plasma-Stimulated Cells	Satoshi Uchida	Tokyo Metropolitan University	Takehiko Sato	Institute of Fluid Science
J26I003	Control of Molecular Vibrations by Nano-Wave Fields and Application to Macro-Scale Flow Structures	Hiroki Gonome	Yamagata University	Junnosuke Okajima	Institute of Fluid Science
J26I004	Experimental Study of Shielding Performance of Thermally-Cured Inflatable Structures	Kanjuro Makihara	Tohoku University	Kiyonobu Ohtani	Institute of Fluid Science
J26I005	Fluid-Structure Interaction Analysis via Residual Force Stabilization	Yu Kawano	Hiroshima University	Yoshiaki Abe	Institute of Fluid Science
J26I006	Impurity Diffusion Behavior in Nanocrystalline Silicon/Silicon Oxide Composite Films	Kazuhiro Gotoh	Niigata University	Takashi Tokumasu	Institute of Fluid Science
J26I007	An Analysis of Mechanism of Geometrical Characteristics of Bundles of Vortical Axis Lines and Spacial Structure of Local Swirl Plane	Katsuyuki Nakayama	Aichi Institute of Technology	Yuji Hattori	Institute of Fluid Science
J26I008	Study on Underwater Explosion Phenomena of Energetic Materials and the Physics of Bubble Pulses	Kazutaka Kitagawa	Aichi Institute of Technology	Kiyonobu Ohtani	Institute of Fluid Science
J26I009	Study on Flow Structure around Rotor Blade with Turbulators in Low Reynolds Numbers	Hikaru Otsuka	Kanazawa University	Tsubasa Ikami	Institute of Fluid Science
J26I010	Synthesis and Evaluation of Novel Sorbent Composites for Fluorinated Organics	Igor Novosselov	University of Washington	Hidemasa Takana	Institute of Fluid Science
J26I011	Development of Advanced Laminarization Device for Controlling Crossflow-Induced Transition	Makoto Hirota	Institute of Fluid Science	Stefan Hein	The German Aerospace Center
J26I012	Dynamics of Shockwave and Transport of Ballistic Blocks in a Volcanic Eruption	Kae Tsunematsu	Yamagata University	Kiyonobu Ohtani	Institute of Fluid Science
J26I013	Molecular Dynamics Simulation for Determining Static and Kinetic Parameters of CO <sub>2</sub> Adsorption in Direct Air Capture (DAC) Applications	Nasruddin Yusuf Rodjali	Universitas Indonesia	Takashi Tokumasu	Institute of Fluid Science
J26I014	Clarifying the Effect of the Shape of the Trailing Edge of the Wing on Tone Noise and the Mechanism Behind It	Hiroaki Sumikawa	Iwate University	Tsubasa Ikami	Institute of Fluid Science
J26I015	Expression of New Functions of Water by Impinging High-Speed Nanodroplets	Takehiko Sato	Institute of Fluid Science	Seiji Kanazawa	Oita University
J26I016	Generation and Characteristics of Charged Bubble	Takehiko Sato	Institute of Fluid Science	Mohamed Farhat	Ecole Polytechnique Federale de Lausanne (EPFL)
J26I017	Liquid Flow Driving Mechanism Induced by Gas-Liquid Plasma Flow	Takehiko Sato	Institute of Fluid Science	Lin Che-Hsin	National Sun Yat-sen University
J26I018	Exploring a Drop's Evaporation through Experiments and Models: The Role of Internal and External Flow	Deepak Kumar Mandal	Indian Institute of Technology (ISM)	Junnosuke Okajima	Institute of Fluid Science
J26I019	A Study on Mesh Projection Matrices for Aeroelastic-Flight Dynamics Coupling of Aircraft with Passive Control Surfaces	Naoto Morita	Velocity Aeroworks Co., Ltd.	Yoshiaki Abe	Institute of Fluid Science
J26I020	Characteristics of Ammonia-Air Flames Interacting with Walls (AMMOWALL)	Pradip Xavier	CNRS CORIA / INSA Rouen Normandie	Akihiro Hayakawa	Institute of Fluid Science
J26I021	Multiphase Thermally Coupled Computing Approach to the Development of Pulsating Heat Pipes under Microgravity Conditions	Jun Ishimoto	Institute of Fluid Science	Sławomir Pietrowicz	Wrocław University of Science and Technology
J26I022	Arterial Bifurcation Induced Fluid Mechanics of Cerebral Aneurysms	Ramesh Narayanaswamy	Curtin University	Makoto Ohta	Institute of Fluid Science
J26I023	Measurement of Aerodynamic Forces on Sports Equipment	Kazuya Seo	Kogakuin University	Hiroki Nagai	Institute of Fluid Science
J26I024	Silicon Carbide Crystal Growth and Its Simulation on Three-Dimensional Structure of Different Materials using ReaxFF	Wakana Takeuchi	Aichi Institute of Technology	Takashi Tokumasu	Institute of Fluid Science
J26I025	Three-Dimensional Numerical Simulation on Gas Pore Inside Liquid Metal Droplet	Joe Yoshikawa	Industrial Technology Institute, Miyagi Prefectural Government	Hidemasa Takana	Institute of Fluid Science
J26I026	Oxidation Initiation and Flame Propagation Suppression Mechanisms of Phosphate Ester Flame Retardants in Reactive Jets during Lithium-Ion Battery Thermal Runaway	Yasuyuki Sakai	Ibaraki University	Keisuke Kanayama	Institute of Fluid Science
J26I027	Shock Wave Experiments Around a Hypersonic Vehicle for CFD Validation Data Acquisition	Michiko Furudate	Chungnam National University	Hiroki Nagai	Institute of Fluid Science
J26I028	Elucidation of Taylor-Couette Flow Field under Electromagnetic Fields and Its Application to Energy Conversion Devices	Hikomichi Kobayashi	Keio University	Hidemasa Takana	Institute of Fluid Science
J26I029	Numerical Study on Energy and Scalar Transfer in Turbulence with Non-Equilibrium Features	Yasumasa Ito	Nagoya University	Yuji Hattori	Institute of Fluid Science
J26I030	Reproducing Large Degree-of-Freedom Fields and Developing Actuator Placement Optimization Algorithm toward Development of Weather Modification Technology	Taku Nonomura	Nagoya University	Yoshiaki Abe	Institute of Fluid Science
J26I031	Local Heat Transfer Characteristics of a Plate Heat Exchanger using a Thin Heat Transfer Surface	Tomoki Hirokawa	University of Hyogo	Hiroki Nagai	Institute of Fluid Science
J26I032	Unsteady Aerodynamic Characteristics of Flexible-Membrane Wing for Mars Airplane	Daisuke Sasaki	Osaka Metropolitan University	Hiroki Nagai	Institute of Fluid Science
J26I033	Synthesis of Sodium-Ion Battery Anode Materials Using Combined Process of In-Liquid Plasma with Ultrasonic Cavitation	Nozomi Takeuchi	Institute of Science Tokyo	Hidemasa Takana	Institute of Fluid Science

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J26I034	Development of Ultra-Bright Pressure-Sensitive Paint using Nanomaterials and Application in Low-Speed Wind Tunnel Experiments	Kanako Watanabe	Tohoku University	Tsubasa Ikami	Institute of Fluid Science
J26I035	Digital Twin R&D of Flexible Membrane Wing with Wing Veins by Wind Tunnel Test and Numerical Simulation	Tsubasa Ikami	Institute of Fluid Science	Masahiro Kanazaki	Tokyo Metropolitan University
J26I036	Experimental Characterization of Boundary Layers under Cooling and Heating Conditions	Kiyoshi Kinefuchi	Nagoya University	Hiroki Nagai	Institute of Fluid Science
J26I037	Investigating Fire Suppressants for Lithium-Ion Battery Electrolytes: Methyl 2,2,2-Trifluoroethyl Carbonate	Olivier Mathieu	Texas A&M University	Hisashi Nakamura	Institute of Fluid Science
J26I038	Calculation of Local Surface Tension Field of Lipid Monolayer under Rapid Deformation	Tetsuya Kanagawa	University of Tsukuba	Takuya Mabuchi	Institute of Fluid Science
J26I040	Coupled Aeroelastic-Flight Dynamics Simulation and Wind Tunnel Experiment	Keisuke Otsuka	Tohoku University	Yoshiaki Abe	Institute of Fluid Science
J26I041	Study of the Liquid Film Thickness near the Capillary Limit	Andrzej Ireneusz Nowak	Wroclaw University of Science and Technology	Junnosuke Okajima	Institute of Fluid Science
J26I042	Study on Spray Formation and High-Pressure Combustion Stability of Liquid Fuels for Next-Generation Zero-Carbon Gas Turbines	Ruoyang Yuan	University of Sheffield	Akihiro Hayakawa	Institute of Fluid Science
J26I045	Fundamental Experiments on Debris Cloud Formation to Improve Performance of Gyroid Structure Space Debris Bumpers	Masahiro Nishida	National Defense Academy of Japan	Kiyonobu Ohtani	Institute of Fluid Science
J26I046	Performance Investigation and Optimization Analysis of a Spectral Splitting Concentrating Photovoltaic Thermal (CPVT) System with a Unique Design: Numerical and Experimental Approaches	Abid Ustaoglu	Bartın University	Junnosuke Okajima	Institute of Fluid Science
J26I047	Development of Forecasting Method for Fluid Flows	Yu Matsuda	Waseda University	Hiroki Nagai	Institute of Fluid Science
J26I048	Machine-Learning-Based Analysis for Microseismic Monitoring of Water Injection in Muara Laboh Geothermal Field, Indonesia	Dian Darisma	University of Syiah Kuala	Yusuke Mukuhira	Institute of Fluid Science
J26I049	Study of Bis(2,2,2-trifluoroethyl) Methyl Phosphonate: A Fire Suppressant for Lithium-Ion Battery Electrolytes	Claire Gregoire	University of Florida	Keisuke Kanayama	Institute of Fluid Science
J26I050	Dynamics Simulation of Endothelial Cell Migration under Shear Flow	Narendra Kurnia Putra	Institut Teknologi Bandung	Hitomi Anzai	Institute of Fluid Science
J26I051	Dynamics of Single Cavitation Bubbles in Carbon Dioxide-Supersaturated Water	Siwei Liu	Institute of Fluid Science	Davide Bernardo Preso	University of Torino
J26I053	Advanced Control of Cavitation Dynamics via Electric Charge Distribution	Siwei Liu	Institute of Fluid Science	Outi Supponen	ETH
J26I054	Cellulose Nanofibers Modified with Carbon Quantum Dots for the Wound Healing Applications	Jiri Jenista	Institute of Plasma Physics ASCR, v.v.i.	Hidemasa Takana	Institute of Fluid Science
J26I055	Research on the Reduction Mechanism of the Turbulent Friction Drag by Distributed Micro Roughness	Takuya Kawata	Shibaura Institute of Technology	Aiko Yakeno	Institute of Fluid Science
J26I056	Advanced Microseismic Data Analysis for Understanding Hydrothermal System of the Kuju Volcano	Tatsunori Ikeda	Kyushu University	Yusuke Mukuhira	Institute of Fluid Science
J26I058	Synthesis and Microstructural Evaluation of Magnesium-Based Compound Semiconductors	Haruhiko Udono	Ibaraki University	Kazuhiko Endo	Institute of Fluid Science
J26I059	Tracer-Assisted Visualisation of Shear Thickening Fluid Migration and Jamming Behaviour in Confined and Subsurface Systems	Tongfei Tian	University of the Sunshine Coast	Yusuke Mukuhira	Institute of Fluid Science
J26I060	High-Efficiency Ammonia Production by Interfacial Reaction between Fine Water Droplet and Nitrogen Plasma	Ryoya Shiraishi	Yamaguchi University	Takashi Tokumasu	Institute of Fluid Science
J26I061	Numerical Modeling of Transport Phenomena in the Vicinity of Solid-Liquid Interface in Desalination with Gas Hydrate Formation	Yuki Kanda	Institute of Fluid Science	Hiroyuki Komatsu	Niigata University
J26I062	Development of a Method for Predicting Flow Phenomena in Fuel Cells during a Long Start-Up Time	Seiichiro Morizawa	National Institute of Technology, Okinawa College	Takashi Tokumasu	Institute of Fluid Science
J26I063	Study on Improving the Performance of a Roadable Aircraft with Wind Tunnel Testing and Fluid Simulation	Seiichiro Morizawa	National Institute of Technology, Okinawa College	Tsubasa Ikami	Institute of Fluid Science
J26I065	Atomic-Scale Structural Analysis of Functional Interfaces in Silicon-Based Semiconductors	Noritaka Usami	Nagoya University	Takashi Tokumasu	Institute of Fluid Science
J26I066	Integrated Analysis of a Propfan-Engine-Powered Airliner for Improved Fuel Efficiency	Kazuhisa Chiba	The University of Electro-Communications	Yoshiaki Abe	Institute of Fluid Science
J26I067	Stiffness Effect on Internal Carotid Aneurysm using CFD-FSI	Nadia Shaira Binti Shafii	Universiti Teknologi Malaysia	Makoto Ohta	Institute of Fluid Science
J26I068	Investigation of Device Fabrication Techniques for Sulfide-Based Nanomemory	Takeo Ohno	Oita University	Kazuhiko Endo	Institute of Fluid Science
J26I069	Synthesis and Characterization of Novel Group IV Clathrate Semiconductors with Direct Transition	Tetsuji Kume	Gifu University	Kazuhiko Endo	Institute of Fluid Science
J26I070	Numerical and Experimental Evaluation of a Free-Stream Rebuilding Method by a Double-Jacketed Enthalpy Probe in Supersonic Flows	Jun-Ho Seo	Jeonbuk National University	Hidemasa Takana	Institute of Fluid Science
J26I071	Magnetic Incremental Permeability Detection Method and Experimental Technology for Stress under High-Temperature for Ferromagnetic Materials	Shurui Zhang	Beijing University of Technology	Tetsuya Uchimoto	Institute of Fluid Science
J26I073	Experimental Study on the Characterization and Control of Electrohydrodynamic Phenomena in Plasma Actuators	Hiroyuki Nishida	Tokyo University of Agriculture and Technology	Yutaka Kaneko	Institute of Fluid Science

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J26I074	Advection-Diffusion Solution of the Internal MRI Environment of a Non-Magnetic Fluid Control Device for Analysis of Brain Function in Response to Olfactory Stimulation	Yusuke Inoue	Asahikawa Medical University	Junnosuke Okajima	Institute of Fluid Science
J26I075	Fabrication of Flow Chamber for Nanofibrous Layer Covered Stents	Angela Jedlovszky-Hajdu	Semmelweis University	Makoto Ohta	Institute of Fluid Science
J26I076	Fabrication of Metal/Dielectric Plasmonic Nanostructures and Evaluation of Their Emission Enhancement Properties	Takayuki Kiba	Kitami Institute of Technology	Kazuhiko Endo	Institute of Fluid Science
J26I079	Coupled Numerical Analysis of Free-Motion and Flow around Atmospheric Entry Capsule	Yuki Takeda	Iwate University	Hiroki Nagai	Institute of Fluid Science
J26I080	Investigation of Aerodynamic Effects of Structural Features and Rotation in Sports Projectiles	Hiroaki Hasegawa	Utsunomiya University	Hiroki Nagai	Institute of Fluid Science
J26I081	Carbon Dioxide Fixation Technology by Microalgae Lipid Membrane using Molecular Dynamic Simulation	Fayza Yulia	Universitas Pertamina	Takuya Mabuchi	Institute of Fluid Science
J26I082	Feasibility Study on Surrogate Models Adaptable to Short-Term Variability in Meteorological Fields	Takahiro Ukai	Osaka Institute of Technology	Aiko Yakeno	Institute of Fluid Science
J26I083	A Study on Nano/Mezo-Scale Interfacial Phenomena between Surface-Modified Material and Dispersed Media	Masaki Kubo	Tohoku University	Atsuki Komiya	Institute of Fluid Science
J26I084	Experimental Investigation on Shock Wave Development in Opaque Medium	Toshiharu Mizukaki	Tokai University	Kiyonobu Ohtani	Institute of Fluid Science
J26I085	Enhanced Charging of a Thermal Battery using Electrohydrodynamics	James Cotton	McMaster University	Takehiko Sato	Institute of Fluid Science
J26I086	Understanding the Role of Fluids in the Nucleation Process of the Noto, Japan, 2024, Mw 7.5 Earthquake	Cornelius Langenbruch	Freie Universität Berlin	Yusuke Mukuhira	Institute of Fluid Science
J26I088	Elucidation of Flame Holding and Extinguishing Mechanisms in Non-Premixed Ammonia Flames using Computational Singular Perturbation	Hiroshi Terashima	Hokkaido University	Hisashi Nakamura	Institute of Fluid Science
J26I089	Control of Wake of Wind Turbines Based on Instability of Helical Vortices	Yuji Hattori	Institute of Fluid Science	Ivan Delbende	Sorbonne Universite
J26I090	Depth-Resolved Nondestructive Evaluation of Multilayered Structures Based on Electromagnetic/Thermal-Wave Tomography Technology	Shejuan Xie	Xi'an Jiaotong University	Tetsuya Uchimoto	Institute of Fluid Science
J26I091	Impact Compressive Deformation Behavior of Artificial Pumice for Reinforcement of Shelter against Ballistic Ejecta	Kohei Tateyama	Muroran Institute of Technology	Kiyonobu Ohtani	Institute of Fluid Science
J26I092	Four-Dimensional Density Measurement of Wake Region behind Re-Entry Capsule Model to Clarify the Mechanism of Its Dynamic Instability	Masanori Ota	Chiba University	Hiroki Nagai	Institute of Fluid Science
J26I093	Free-Motion Wind Tunnel Tests using a Vertical Wind Tunnel	Kazuyuki Ueno	Iwate University	Hiroki Nagai	Institute of Fluid Science
J26I094	The Blood-Brain Barrier Microfluidics for Drug Development of Brain Metastasis	Masanori Tachikawa	Tokushima University	Kenichi Funamoto	Institute of Fluid Science
J26I095	Molecular Dynamics Study of Nano-Bubble on Solid Surface and Surface Property	Hiroki Nagashima	University of the Ryukyus	Takashi Tokumasu	Institute of Fluid Science
J26I097	The Structure and Propagation of Ignition Fronts of Reacting Mixtures under Autoignitive Engine-Relevant Conditions: From Deflagration to Detonation	Minh Bau Luong	Hanoi University of Science and Technology (HUST)	Youhi Morii	Institute of Fluid Science
J26I098	Sustainable Field-Assisted Assembly of Nanocellulose-PEDOT Macroscopic Materials for Integrated Ammonia Sensing and Hydrovoltaic Energy Harvesting	Hidemasa Takana	Institute of Fluid Science	Anthony B. Dichiara	University of Washington
J26I099	Evaluation of Thermal Propagation Properties at the Interface between Nano-Sized Semiconductors and Metals by Laser Heterodyne Photothermal Displacement Method	Atsuhiko Fukuyama	University of Miyazaki	Kazuhiko Endo	Institute of Fluid Science
J26I101	A Novel Microfluidic Prototype for the Filtration of Selective Leukapheresis	Yasser Abuouf	Alexandria University	Makoto Ohta	Institute of Fluid Science
J26I102	Numerical Study on High-Speed Space Transportation System Driven by Partially-Ionized Plasma Flow	Masayuki Takahashi	Tohoku University	Hiroki Nagai	Institute of Fluid Science
J26I103	Effect of Cracks on the Antibacterial Activity of Ag- and Cu-Containing DLC Nanocomposite Films	Minoru Goto	National Institute of Technology, Ube College	Tetsuya Uchimoto	Institute of Fluid Science
J26I104	Diagnostic Flow Control for Transition Delay in Swept-Wing Boundary Layers	Takashi Matsuno	Tottori University	Hiroki Nagai	Institute of Fluid Science
J26I105	Study on Visualization of Concentration Boundary Layer near Gas-Liquid Interface in Gas Absorption	Yuki Kanda	Institute of Fluid Science	Junhao Ke	The University of Sydney
J26I107	Data-Driven Science of Coarse-Grained High Reynolds Number Turbulence based on Large-Scale DNS	Takashi Ishihara	Okayama University	Yuji Hattori	Institute of Fluid Science
J26I108	Oxygen Ion Conduction Property in Solid Oxide Electrolyte Membrane based on Multi-Scale Method	Takashi Tokumasu	Institute of Fluid Science	Jeongmin Ahn	Syracuse University
J26I109	Molecular Simulation of Conductive Polymer Electrolyte Composite Membranes for Application in Electrochemical Devices	Phumlani Msomi	University of South Africa	Takuya Mabuchi	Institute of Fluid Science
J26I110	Development of Transparent Ultrasound Phantom Material: Sound Velocity Study	Muhammad Shiddiq Sayyid Hashuro	Bandung Institute of Technology	Makoto Ohta	Institute of Fluid Science
J26I111	Re-Interpretation of the Balance among Reaction, Flow Fields, and Diffusion in Flame Structures	Kaname Matsue	Kyushu University	Youhi Morii	Institute of Fluid Science
J26I112	Fundamental Study of the Unsteady Pressure Field on the Ground Surface Generated by Projectile-Induced Shock Waves using DP-AA-PSP	Daiju Numata	Tokai University	Kiyonobu Ohtani	Institute of Fluid Science

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J26I115	Analysis of Heat and Momentum Transport Characteristics via Water Droplets in Microchannels using Local Stress and Heat Flux	Akinori Fukushima	University of Fukui	Takashi Tokumasu	Institute of Fluid Science
J26I117	Development of Ferroelectric Gate Stack Process for Advanced Node MOSFETs	Yukinori Morita	National Institute of Advanced Industrial Science and Technology (AIST)	Kazuhiko Endo	Institute of Fluid Science
J26I118	Development of Estimation Method for Speed of Sound in Blood Flow using Ultrasonic Measurement with High Temporal Resolution	Ryo Nagaoka	University of Toyama	Makoto Ohta	Institute of Fluid Science
J26I120	Mechanistic Study of Initial Adsorption in Ru Atomic Layer Deposition	Daisuke Ohori	Kansai University	Kazuhiko Endo	Institute of Fluid Science
J26I121	Engineering 3D Oxygen Gradients in Microfluidic Devices	Kenichi Funamoto	Institute of Fluid Science	Cheng Pau Lee	Singapore University of Technology and Design
J26I123	Predicting Thermo-Physical Properties of Organic Materials using Various Machine Learning Models	Hari Krishna Chilukoti	National Institute of Technology, Warangal	Gota Kikugawa	Institute of Fluid Science

105 selected projects

**List of selected projects for International Multiple Collaborative Research Project 2026, IFS, Tohoku University**

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member (Institution)
J26R001	Cardiac Patches with Integrated Flexible Fibrous Electrodes for Oriented Myocardial Tissue Culture and Electrophysiological Sensing	Aike Qiao	Beijing University of Technology	Makoto Ohta (Institute of Fluid Science), Hongfang Song (Capital Medical University)
J26R002	Proposal of a Simple Simulation Method for the Growth of Functional Materials	Satoru Kaneko	Kanagawa Institute of Industrial Science and Technology	Takashi Tokumasu (Institute of Fluid Science), Rwei-Sung Yu (National Chin-Yi University of Technology), Sahoo Sumanta (Radhakrishna Institute of Technology and Engineering), Can Musa (Istanbul University), Ionita Mariana (University Politehnica of Bucharest), Meskinis Sarunas (Kaunas University of Technology), Ngesa Ezekiel (University of Dar es Salaam)
J26R003	Utilization of Coastal Wave Energy as Renewable Energy and Enhancement of Coastal Protection through Turbine Optimization in the Overtopping Breakwater for Energy Conversion (OBREC)	Raditya Hendra Pratama	National Research and Innovation Agency	Ippei Oshima (Institute of Fluid Science), Samsu Dlukha Nurcholik (Kalimantan Institute of Technology)
J26R004	Towards Fluid-Structure Interaction Analysis using High-Order Flux-Reconstruction Scheme and Cross-Platform-Based Parallel Computation	Yoshiaki Abe	Institute of Fluid Science	Freddie Witherden (Texas A&M University), Peter Vincent (Imperial College London), Brian Vermeire (Concordia University), Jin-Seok Park (Inha University)
J26R005	Elucidation of Cancer Metastasis Mechanisms Caused by Circulating Tumor Microemboli using Tapered Vessel-on-a-Chip	Ting-Yuan Tu	National Cheng Kung University	Kenichi Funamoto (Institute of Fluid Science), Caroline Moyret-Lalle (University Claude Bernard Lyon)
J26R006	Controlling Photopolymerization using an Oxygen-Controlled Microfluidic Device	Michinao Hashimoto	Singapore University of Technology and Design	Kenichi Funamoto (Institute of Fluid Science), Nicolas Aznar (CNRS), Chia-Hung Chen (City University of Hong Kong)

6 selected projects

**List of selected projects for Priority Collaborative Research Project 2026, IFS, Tohoku University**

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member (Institution)
J26J001	Quasi-Droplet Science and the New Water-Utilization Society	Takehiko Sato	Institute of Fluid Science	Kosuke Tachibana (Oita University), Hiroharu Yui (Tokyo University of Science), Minoru Tanigaki (Kyoto University), Yoshihisa Harada (The University of Tokyo), Shigeru Fujimura (Tohoku Medical and Pharmaceutical University), Kazumichi Kobayashi (Hokkaido University), Takashi Miyahara (Shizuoka University), Shigeru Yonemura (Chubu University)

1 selected projects

List of selected projects for LyC Collaborative Research Project 2026, IFS, Tohoku University (as 29th May, 2026)

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J26Ly01	CO <sub>2</sub> Absorption by Ionic Liquid in a Microfluidic Systems	Serge Simoens	LMFA / UMR CNRS 5509 / ECL / INSA Lyon / UCB Lyon 1	Hidemasa Takana	Institute of Fluid Science
J26Ly02	Modelling on the Behaviour of Elastomers Doped with Ionic Liquids for Displacement Sensor & Energy Harvesting Applications	Gildas Coativy	INSA Lyon	Hidemasa Takana	Institute of Fluid Science
J26Ly03	Shape Estimation of Rough Surface based on Ultrasonic Reflected Wave using Physics-Informed Neural Network	Hiroyuki Nakamoto	Kobe University	Tetsuya Uchimoto	Institute of Fluid Science
J26Ly04	Crossover Study between Dynamic Mode Decomposition and Stability Analysis of Nonlinear Flow Behavior Occurring between a Rotating Double Cylinder / Circular Cone	Takahiro Adachi	Akita University	Atsuki Komiya	Institute of Fluid Science
J26Ly05	KERATOX project: Study of the Impact of Hypoxia on Human Keratinocytes	Nicolas Aznar	LBTI / UMR CNRS 5305 / UCB Lyon 1	Kenichi Funamoto	Institute of Fluid Science
J26Ly06	Monitoring Eukaryotic Cell Functions under Controlled Oxygen Conditions with Microfluidic Devices	Jean-Paul Rieu	University Claude Bernard Lyon 1	Kenichi Funamoto	Institute of Fluid Science

6 selected projects