20th Asia-Pacific International Symposium on Microscale Separations and Analysis

held in conjunction with **CECE**

17-19 September 2025 @ Kyoto, Japan

Fujita Commemorative Lecture Hall
Kyoto University

Chair
Takuya Kubo
Kyoto Prefectural University

Co-Chair
Kenji Hamase
Kyushu University

Yasushi Ishihama
Kyoto University

APCECE 2025
Sep. 17-19 Kyoto, JAPAN

Map of Venues

① Venue

Kyoto University Pharmaceutical Sciences

46-29 Yoshida-Shimo-Adachi-cho, Sakyo-ku, Kyoto 606-8501

② Banquet

Miyako Hotel Kyoto Hachijo

7 Nishikujo Inmachi, Minami Ward, Kyoto, 601-8412

Day 1: Wednesday, September 17th

Opening and Plenary Lecture 1 *Fujita Memorial Hall*		
15:00–15:10	**APCE&CECE Opening (Takuya Kubo)**	
Chair: Kenji Hamase (Kyushu University, Japan)		
15:10–15:55	**PL-1**	**Future Trends in HPLC Column Technology** Gert Desmet *Vrije Universiteit Brussels, Belgium*
15:55–16:10	**Coffee Break**	
Chair: Yasushi Ishihama (Kyoto University, Japan)		
16:10–16:55	**PL-2**	**In vivo cross-linking mass spectrometry to decipher large scale protein conformations and interactions** Lihua Zhang *Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China*
Chair: Yoshiyuki Watabe (Shimadzu General Service, Japan)		
16:55–17:40	**PL-3**	**From Sample to Data: Enhancing Analytical Workflows with Automation** Kyoko Watanabe *Shimadzu Scientific Instruments, Inc., USA*

Day 2: Thursday, September 18th

Plenary Lecture 2
Fujita Memorial Hall

Chair: Takuya Kubo (Kyoto Prefectural University, Japan)

9:15–10:00 **PL-4** **Emerging Trends in AI for Chemistry and Its Applications to Analytical Chemistry**
Ryo Yoshida
The Institute of Statistical Mathematics, Japan

10:00–10:45 **PL-5** **Surrogate Optimization using Multivariate Adaptive Regression Splines for On-Line Supercritical Fluid Extraction – Chromatography Method Development**
Kevin Schug
University of Texas, Arlington, USA

10:45–11:00 **Coffee Break**

Oral Session 1
Fujita Memorial Hall

Chair: Frantisek Foret (Czech Academy of Sciences, Czech Republic)

11:00–11:20 **KN-1** **Non-destructive forensic document examination 1 of ballpoint cationic inks 2 by blotting-capillary electrophoresis**
Doo Soo Chung
Seoul National University, Korea

11:20–11:40 **KN-2** **Portable Chip Electrophoresis Sensing for Biomedical Assay Based Moving Reaction Boundary**
ChengXi Cao
ShangHai Jiao Tong University, China

11:40–12:00 **KN-3** **Microfluidic Chip Combined with Mass Spectrometer for Single Cell Analysis**
Jin-Ming Lin
Tsinghua University, China

Oral Session 2
Lecture Room A

Chair: Kenichi Nagase (Hiroshima University)

11:00–11:20 **KN-4** **Microfluidics for Extracellular Vesicles: from diagnosis to therapy**
Bi-Feng Liu
Huazhong University of Science and Technology, China

11:20–11:40 **KN-5** **Molecular engineering at interfaces for bioparticle separation: from organelle to intact cell**
Yanyan Huang
Institute of Chemistry, Chinese Academy of Sciences, China

11:40–12:00 **KN-6** **Advanced Molecularly Imprinted Polymers for Sample Pretreatment and Disease Diagnosis**
Zhen Liu
Nanjing University, China

Oral Session 3
Lecture Room C

Chair: Ruijun Tian (Southern University of Science and Technology, China)

11:00–11:15 **OR-1** **Programmable Flow Injection for online solid phase extraction and more**
Petr Chocholouš
Charles University, Czech Republic

11:15–11:30 **OR-2** **Nano-liter Sample Pretreatment of Glycans for Capillary Electrophoresis Analysis**
Chenchen Liu
Kyushu University, Japan

11:30–11:45 **OR-3** **Electrodriven Ion Focusing and Stacking on A Polymer Inclusion Membrane**
Bangxuan Ng
Universiti Teknologi Malaysia, Malaysia

11:45–12:00	**OR-4**	**Aptamer selection based on microscale electrophoretic filtration** Kenji Sueyoshi *Kitasato University, Japan*
12:00–12:15	**Break**	

Luncheon seminar ***Lecture Room A***		
12:15–13:15	**Analytical Intelligence: mathematical approaches for enhancing chromatographic separations** Davide Vecchietti *Shimadzu Corporation, Japan*
12:15–13:30	**Lunch, Coffee Break (Free Breads and Drinks)**	

Poster Session 1 (odd number) ***Pilotis & Outreach area***	
13:30–14:30	**Presenters must stand by each poster**
14:30–14:45	**Coffee Break**

Oral Session 4 ***Lecture Room A***		
Chair: Doo Soo Chung (Seoul National University, Korea)		
14:45–15:05	**KN-7**	**New Methods Contributing to Metabolomics Analyses of Single Cells** Guowang Xu *Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China*
15:05–15:25	**KN-8**	**Dynamic single-cell metabolomics platform and its application in cell-cell interaction** Yu Bai *Peking University, China*
15:25–14:45	**KN-9**	**Preparation of cation-exchange stationary phases for rare earth ion separation** Hongdeng Qiu *Lanzhou Institute of Chemical Physics, China*

14:45–16:00	**OR-5**	**Polyacrylamide-modified Monolithic Silica Capillary Columns for the Separation of Polar Analytes** Tohru Ikegami *Kyoto Institute of Technology, Japan*

Oral Session 5
Lecture Room C

Chair: Shinya Kitagawa (Nagoya Institute of Technology, Japan)

14:45–15:05	**KN-10**	**Multi-Dimensional Characterization of Environmental Nanoparticles by Mass Spectrometry Techniques** Qian Liu *Research Center for Eco-Environmental Sciences, China*
15:05–15:25	**KN-11**	**Taylor Dispersion Analysis for Size Characterization of Charged Polymers and Silica Nanoparticles** Phoonthawee Saetear *Mahidol University, Thailand*
15:25–14:45	**KN-12**	**High-sensitive spatial visual proteomics** Ruijun Tian *Southern University of Science and Technology, China*
14:45–16:00	**OR-6**	**Gold nanostructures as a tool for biothiols preconcentration from non-invasive samples** Jiri Volanek *Masaryk University, Czech Republic*
16:00–16:15	**Coffee Break**	

Oral Session 6
Lecture Room A

Chair: Yanyan Huang (Institute of Chemistry, Chinese Academy of Sciences, China)

16:15–16:30	**OR-7**	**Bone Marrow Derived Mesenchymal Stem Cell Purification Using Thermoresponsive-Cationic Copolymer Brush Modified Beads Packed Column** Kenichi Nagase *Hiroshima University, Japan*

16:30–16:45 **OR-8** **Salivary Lysozyme Determination by Simple CZE-UV: Possibilities and Challenges**
Katarína Maráková
Comenius University Bratislava, Slovakia

16:45–17:00 **OR-9** **Pros and Cons of the Schlieren Effect in Flow-based Analysis and Its Application for Quality Control in Food and Pharmaceutical Formulations**
Nakarin Noirahaeng
Mahidol University, Thailand.

17:00–17:15 **OR-10** **Amine-Functionalized Fe_3O_4@SiO_2 as Magnetic Dispersive Adsorbents for the Pre-concentration of Selective Serotonin Reuptake Inhibitor Antidepressants from Aqueous Solutions: Analytical Performance, Sorption Modeling, and Greenness**
Wan Mohd Afiq Wan Mohd Khalik
Universiti Malaysia Terengganu, Malaysia

Oral Session 7
Lecture Room C

Chair: Zhen Liu (Nanjing University, China)

16:15–16:30 **OR-11** **Integrated Multidimensional Analytical Strategies for Quality Assessment of Valuable Agarwood (Aquilaria spp.)**
Yanqiao Xie
International Centre for Standardization of Chinese Medicine, China

16:30–16:45 **OR-12** **Multi-platform mass spectrometry for in-depth chemical profiling and anti-platelet compound identification in Panax Notoginseng**
Wenxiang Fan
International Centre for Standardization of Chinese Medicine, China

16:45–17:00	**OR-13**	**Development of a Simple Analytical Method for Legionella pneumophila Using Novel DNA Aptamer-Gold Nanoparticle Conjugates** Koji Matsunaga *Saitama University, Japan*
17:00–17:15	**OR-14**	**Corticoid activity in the Baltic Sea waters: an effect-directed analysis** Paulina Gozdzik *Medical University of Gdansk, Poland* ***withdraw***

Symposium Banquet ***Miyako Hotel, Kyoto Hachijo***	
18:30–21:00	**Dinner, Dring, and Entertainment**

Day 3: Friday, September 19th

	Oral Session 8	
	Lecture Room C	
Chair: Duangjai Nacapricha (Mahidol University, Thailand)		
9:15–9:35	**KN-13**	**Superior Selectivity of Copper Single-Atom Nanozyme Mimicking Galactose Oxidase** Sam Fong Yau Li *National University of Singapore, Singapore*
9:35–9:55	**KN-14**	**From Bottles to Bodies: High-Resolution Microplastics Detection Using Laser** Hong Heng See *University of Technology Malaysia, Malaysia*
9:55–10:15	**KN-15**	**Multi-organoid Microphysiological Systems and Their Applications in Pharmacology and Toxicology Research** XiuLi Zhang *Soochow University, China*
10:15–10:35	**KN-16**	**Epitachophoresis for purification and concentration of biopolymers from large sample volumes** Frantisek Foret *Czech Academy of Sciences, Czech Republic*
10:35–10:45	**Coffee Break**	
	Oral Session 9	
	Lecture Room C	
Chair: Sam Fong Yau Li (National University of Singapore, Singapore)		
10:45–11:05	**KN-17**	**Portable Sensors Utilizing Small Sample Volumes for Forensic and Security Applications** Duangjai Nacapricha *Mahidol University, Thailand*
11:05–11:25	**KN-18**	**Portable Capillary Electrophoresis Instrument for On-Site Forensic Analysis** Peter Hauser *University of Basel, Switzerland*

11:25–11:45	**KN-19**	**Ion-pairing in peptide RPLC separations: unexpected features and their consequences** Oleg Krokhin *University of Manitoba, Canada*
11:45–12:00	**OR-15**	**Enhancing LiP-MS Structural Proteomics with Multi-Protease Complete Digestion Strategies** Kosuke Ogata *Kyoto University, Japan*
12:00–13:15	**Lunch, Coffee Break (Free Breads and Drinks)**	

Poster Session 2 (even number)
Pilotis & Outreach area

13:15–14:15	**Presenters must stand by each poster**
14:15–14:30	**Coffee Break**

Oral Session 10
Lecture Room C

Chair: Oleg Krokhin (University of Manitoba, Canada)

14:30–14:50	**KN-20**	**Noncovalent Fluorophore Labeling of Biotherapeutics in Sodium Dodecyl Sulfate Capillary Gel Electrophoresis** Andras Guttman *University of Debrecen, Hungary*
14:50–15:10	**KN-21**	**Novel Approaches in Surface-Enhanced Raman Spectrometry for Analysis in Complex Matrices** Anna Tycova *Institute of Analytical Chemistry of the CAS, Czech Republic*
15:10–15:30	**KN-22**	**Developing Ambient Ionization Mass Spectrometry Strategies and Their Applications in Comprehensive Natural Medicine Analysis** Linnan Li *International Centre for Standardization of Chinese Medicine, China*

15:30–15:50	**KN-23**	**Isomer-Specific Separation and Glycomic Insights into Spatiotemporal Dynamics of the Mammalian Brain** Hyun Joo An *Chungnam National University, Korea*
15:50–16:00	**Coffee Break**	
	Oral Session 11 ***Lecture Room C***	
Chair: Anna Tycova (Institute of Analytical Chemistry of the CAS, Czech Republic)		
16:00–16:20	**KN-24**	**Advancing Food Safety from Bench to Field: Portable Electrochemical Devices with In-Situ Sample Pretreatment for Sulfite Detection** Kanchana Uraisin *Mahidol University, Thailand*
16:20–16:40	**KN-25**	**waiting** KihWan Choi *Korea Research Institute of Standards and Science, Korea*
16:40–16:55	**OR-16**	**Evaluating process development strategies through a multi-attribute mass spectrometry approach to minimize disulfide bond-related modifications in monoclonal antibodies (mAbs)** Ameya Parkar *Nathalal Parekh Marg, India.*
16:55–17:10	**OR-17**	**Enhanced-Sensitivity Profiling of Natural Products from TLC Plates Using a Facile Graphite-Based LA-DART-MS Platform** Xingyu Wang, *International Centre for Standardization of Chinese Medicine, China*
	Closing	
17:10–17:30	**Best Poster Award** **Announcement for APCE2027 (Duangjai Nacapricha)** **Closing Ceremony**	

6th Japan - China Joint Symposium on Separation Science

Opening
Session 1
Lecture Room A

9:10–9:20 **JC-Symposium Opening (Prof. Takuya Kubo, Prof. Guowang Xu)**

Chair: Prof. Guowang Xu, Prof. Toshio Takayanagi

9:20–9:40 **L-1** **History of the Symposium and Specific Interactions in Liquid Phase Separations**
Takuya Kubo
Kyoto Prefectural University, Japan

9:40–10:00 **L-2** **Emerging Toxicants Identification: Methodological and Instrumental Innovations**
Guibin Jiang
Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

10:00–10:20 **L-3** **Development of Frequency Division Multiplex- Mass Spectrometry**
Shinya Kitagawa
Nagoya Institute of Technology

10:20–10:40 **L-4** **Multi-Dimensional Characterization of Environmental Nanoparticles by Mass Spectrometry Techniques**
Qian Liu
Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

10:40–10:50 **Coffee Break**

Session 2		
Lecture Room A		
Chair: Prof. Qian Liu, Prof. Shinya Kitagawa		
10:50–11:10	**L-5**	**Fine Fibrous Materials as the Separation and Sample Preparation Media in Separation Science** Yoshihiro Saito *Toyohashi University of Technology, Japan*
11:10–11:30	**L-6**	**Molecular Engineering at Interfaces for Bioparticle Separation: from Organelle to Intact Cell** Yanyan Huang *Institute of Chemistry, Chinese Academy of Sciences, China*
11:30–11:50	**L-7**	**Investigation of experimental factors in in-capillary continuous enzyme assay to obtain plateau response by electrophoretically mediated microanalysis** Toshio Takayanagi *Tokushima University, Japan*
11:50–12:10	**L-8**	**High-Sensitive Spatial Visual Proteomics** Ruijun Tian *Southern University of Science and Technology, China*
12:10–14:00	**Lunch Break**	

Session 3		
Lecture Room A		
Chair: Prof. Kenji Hamase, Prof. Yu Bai		
14:00–14:20	**L-9**	Capillary Electrophoresis for Separation and Characterization of Protein-DNA Supercomplexes and Aggregates Hailin Wang *Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China*
14:20–14:40	**L-10**	**Highly Sensitive Microchip Electrophoresis by Combining Two On-Line Sample Preconcentration Techniques, LDIS and FASI** Fumihiko Kitagawa

		Hirosaki University, Japan
14:40–15:00	**L-11**	**Microfluidic Chip Combined with Mass Spectrometer for Single Cell Analysis** Gongke Li *Sun Yat-sen University, China*
15:00–15:20	**L-12**	**Multi-Dimensional Characterization of Environmental Nanoparticles by Mass Spectrometry Techniques** Jin-Ming Lin *Tsinghua University, China*
15:20–15:30	**Coffee Break**	
Session 4 ***Lecture Room A***		
Chair: Prof. Yoshihiro Saito, Prof. Hailin Wang		
15:30–15:50	**L-13**	**Single-Cell Metabolomics Platforms and its Applications** Yu Bai *Peking University, China*
15:50–16:10	**L-14**	**Development of Bioanalytical Methods for Biopharmaceuticals Using DNA Aptamers** Kenichiro Todoroki *University of Shizuoka, Japan*
16:10–16:30	**L-15**	**Preparation of Cation-Exchange Stationary Phases for Rare Earth Ion Separation** Hongdeng Qiu *Ganjiang Innovation Academy, Chinese Academy of Sciences, China*
16:30–16:50	**L-16**	**Glycan Superbinders for Biomedical Applications** Zhen Liu *Nanjing University, China*
16:50–17:10	**L-17**	**Machine-gun Proteomics Based on Ultrahigh-speed NanoLC/MS/MS** Yasushi Ishihama *Kyoto University, Japan*

17:10–17:30	**L-18**	**Fully Integrated Microfluidic Chips for in vitro Diagnosis** Bi-Feng Liu *Huazhong University of Science and Technology, China*

Poster Presentation (APCE2025)

September 18th 13:30 to 14:30 (odd number)
September 19th 13:15 to 14:15 (even number)

*Each poster should be mounted by 10:00 on September 18th, and removed at 17:00 on September 19th.
* Presenters are underlined

PO-01 **Prediction of retention time by combining multiple datasets with chromatographic parameter vectorization and transfer learning**

Xiaohui Lin*[a], Yansong Li[a], Di Yu[b] [a]

(School of Computer Science & Technology, Dalian University of Technology[a], Dalian Institute of Chemical Physics[b])

PO-02 **Automatic solid phase extraction with coated microfibrous sorbent as a front end to UHPLC – case of determination of xenobiotic residues in surface water**

Lucie Chocholoušová Havlíková*[a], Petr Chocholouš[a], Jakub Erben[b], Pavel Holec[b], František Švec[a], Dalibor Šatínský[a]

(Charles University, Faculty of Pharmacy, Department of Analytical Chemistry[a], Technical University of Liberec, Faculty of Textile Engineering, Department of Nonwovens and Nanofibrous Materials[b])

PO-03 **Efficient enrichment and rapid determination of pyrrolizidine alkaloids by novel microporous organic network extraction coupled with miniature mass spectrometry**

Liying You[a], Xiyue Yang[a], Chengxiong Yang[b], Zhengtao Wang[a], Li Yang*[a], Linnan Li*[a]

(State Key Laboratory of Discovery and Utilization of Functional Components in Traditional Chinese Medicine, The MOE Key Laboratory of Standardization of Chinese Medicines, Institute of Chinese Materia Medica, Shanghai University of Traditional Chinese Medicine[a], School of Pharmaceutical Sciences & Institute of Materia Medica, Medical Science and Technology Innovation Center, Shandong First Medical University & Shandong Academy of Medical Sciences[b])

PO-04 **Highly Sensitive Microchip Electrophoresis of Cationic Analytes by LDMS**

Fumihiko Kitagawa*[1], Kotaro Ishikawa[1], Takayuki Kawai[2]

(Graduate School of Science and Technology, Hirosaki University[1], Graduate School of Science, Kyushu University[2])

PO-05 **Non-invasive diagnostics of Barrett's esophagus - analysis of bile acids in saliva and exhaled breath condensate**

Jiri Volanek[*[a,b]], Petr Kuban[[a]], Julia Lacna[[a]], Marketa Lastovickova[[c]], Vera Dosedelova[[a]], Stefan Konecny[[d]], Jiri Dolina[[d]]

(Department of Bioanalytical Instrumentation, Institute of Analytical Chemistry of the Czech Academy of Sciences[[a]], Department of Chemistry, Faculty of Science, Masaryk University[[b]], Department of Environmental Analytical Chemistry, Institute of Analytical Chemistry of the Czech Academy of Sciences[[c]], Internal Gastroenterology Department, University Hospital Brno and Faculty of Medicine, Masaryk University[[d]])

PO-06 **On-line electrochemical synthesis of fluorescently labeled glycans utilizing a microfluidic chip with electrodes**

Sachio Yamamoto[*[a]], Ryuki Kosaka[[a]], Asaka Tamari[[a]], Sakura Ida[[a]], Mitsuhiro Kinoshita[[a, b]]

(Faculty of Pharmaceutical Sciences, Kindai University[[a]], Antiaging Center, Kindai University[[b]])

PO-07 **Bioactive Glycan Motif Library Built on Structure-Based Separation for Rapid Profiling of Therapeutic Glycoproteins**

Myung Jin Oh[[a,b]], Hyun Joo An[*[a, b]]

(Graduate School of Analytical Science and Technology, Chungnam National University[[a]], Asia-Pacific Glycomic Reference Site[[b]])

PO-08 **Metabolomic analysis of tear fluid from patients with diabetic retinopathy using chemical isotope labeling liquid chromatography-mass spectrometry (CIL LC-MS)**

Lei Zhou[*[a, b]], Xinyue Wang[[c]], Xuelei Liu[[b]], Thomas Chuen Lam[[b, c]], Allen MY Cheong[[b, c]], W. Scott Hopkins[[d]], Gavin Tan[[e]]

(School of Optometry; Department of Applied Biology and Chemical Technology; Research Centre for SHARP Vision (RCSV), The Hong Kong Polytechnic University[[a]], Centre for Eye and Vision Research (CEVR), The Hong Kong Polytechnic University[[b]], School of Optometry, The Hong Kong Polytechnic University[[c]], Department of Chemistry, University of Waterloo[[d]], Singapore Eye Research Institute[[e]])

PO-09 **Specific Separation of Halogenated Aromatic Compounds via Molecularly Imprinted Polymers Based on Halogen Bonding**

Ryo Yamaguchi[[a]], Takuya Kubo[[a, b]]

(Graduate School of Engineering, Kyoto University[[a]], Graduate School of Life and Environmental Science, Kyoto Prefectural University[[b]])

PO-10 **Quality Control of Synthetic Cyclic Peptides using Two Different Chromatographic Modes**

Kiyoshi Kakiya[*[a]], Ryosuke Kunitani[[a]], Yoshitaka Nemoto[[a]]

(PeptiStar Inc.[[a]])

PO-11 **Separation of IgG fragments utilizing peptidomimetic polymer-modified resins**

Koichi Deura*[a], Daniel Citterio[a], Yuki Hiruta[a]

(Department of Applied Chemistry, Keio University[a])

PO-12 **Development of alkali resistant reversed phase column packing material based on eggshell utilizing Layer-by-Layer self-assembly**

Mai Kawamura*[a], Koichi Deura[a], Naoya Takahashi[a], Daniel Citterio[a], Yuki Hiruta[a]

(Department of Applied Chemistry, Keio University[a])

PO-13 **Automatic optimization of gradient profile using AI algorithms on functional food analysis with HPLC**

Yoshiyuki Watabe*[a, b], Tetsuya Tanigawa[b], Shinichi Fujisaki[c], Hidetoshi Terada[c]

(Shimadzu General Service, Inc.[a], Graduate School of Pharmaceutical Sciences, Kyoto University[b], Shimadzu Corporation[c])

PO-14 **Identification of Isomerization in Tryptic Digested Proteins by LC-IM-TOFMS**

Shinya Kitagawa*, Rio Suzumura, Reina Ogawa, Yoshinori Iiguni

(Department of Engineering, Graduate School of Engineering, Nagoya Institute of Technology)

PO-15 **Retention Behavior for Aromatic Compounds with Polyimide Fine Filaments as a Stationary Phase in Reversed-Phase Liquid Chromatography**

Koki Nakagami*[a], Ayato Yamaguchi[a], Sota Nakamura[a], Ikuo Ueta[b], Yoshihiro Saito[a]

(Department of Applied Chemistry and Life Science, Toyohashi University of Technology[a], Department of Applied Chemistry, University of Yamanashi[b])

PO-16 **Development and Separation characteristic evaluation of β-cyclodextrin modified monolithic silica capillary column**

Takashi Yukiyama*, Hiromi Takano, Hideyuki Otsuki

(SHINWA CHEMICAL INDUSTRIES LTD.)

PO-17 **Design of Experiments-based optimization of acylcarnitines electrospray ionization process**

Julia Jacyna-Gębala*[a], Małgorzata Waszczuk-Jankowska[a], Julia Białkowska[a], Wiktoria Struck-Lewicka[a], Renata Wawrzyniak[a], Michał Jan Markuszewski[a], Danuta Siluk[a]

(Medical University of Gdańsk – Department of Biopharmacy and Pharmacodynamics[a])

PO-18 **Exploration of suitable columns for EPSA measurement using supercritical fluid chromatography and expansion of target compounds**

Shotaro Hirota[a], Yusuke Masuda[a], Yasuhiro Funada[a], Ryo Kubota[a]

(Shimadzu Corporation, Analytical & Measuring Instruments Division, Solutions COE[a])

PO-19 **Estimation of Surface Area of Gold Nanoparticles Through the Adsorption Amount of Cysteine by Capillary Zone Electrophoresis**

Toshio Takayanagi*[a], Minamo Seto[b], Hitoshi Mizuguchi[a], Hirotaka Okabe[c], Naoki Matsuda[c]

(Graduate School of Technology, Industrial and Social Sciences, Tokushima University[a], Graduate School of Science and Technology for Innovation, Tokushima University[b], Sensing System Research Center, National Institute of Advanced Industrial Science and Technology[c])

PO-20 **Towards building a foundation model for automated high-performance liquid chromatography (HPLC) analysis and design**

Stephen Wu*[1,2], Yoshihiro Hayashi[1,2,3], Ryo Yoshida[1,2,3], Hikaru Takaya[4], Takuya Kubo[5]

(The Institute of Statistical Mathematics, Research Organization of Information and Systems[1], The Graduate Institute for Advanced Studies, SOKENDAI[2], Advanced General Intelligence for Science Program (AGIS), RIKEN-TRIP[3], Department of Life & Health Sciences, Teikyo University of Science[4], Graduate School of Life and Environmental Science, Kyoto Prefectural University[5])

PO-21 **The evaluation of a small-capacity polypropylene vial that achieves low bleed and low adsorption**

Tomoha Somano*[a], Kosuke Namiki[b], Yuki Sato[b], Yusuke Osaka[a]

(Shimadzu Corporation[a], Shimadzu GLC Ltd.[b])

PO-22 **Application study of online trap column for fast sample cleanup**

Keiko Yamabe*[a], Daiki Fujimura[a], Yusuke Osaka[a]

(Shimadzu Corporation[a])

PO-23 **Automated scale-up workflow from analytical to Preparative SFC**

Hidetoshi Terada*[a], Yusuke Masuda[a], Ryo Kubota[a]

(Shimadzu Corporation[a])

PO-24 **PRIMARY SUTRUCTURAL ANALYSIS OF PEPTIDES WITH MODIFIED AMINO ACIDS AND CYCLIC PEPTIDES WITH DISULFIDE BONDS**

Miho Akagi*[a], Tomoko Kuriki[a], Kumiko Yamaguchi[a], Hidetoshi Terada[a]

(Shimadzu Corporation[a])

PO-25 **Multidimensional Chiral HPLC Analysis of Lysine and Its Metabolites in Human Urine**

Reiko Koga*[a], Akari Matsuo[a], Masashi Mita[b], Hideyuki Yoshida[a], Hitoshi Nohta[a], Kenji Hamase[c]

(Faculty of Pharmaceutical Sciences, Fukuoka University[a], KAGAMI Inc.[b], Graduate School of Pharmaceutical Sciences, Kyushu University[c])

PO-26 **Advanced Strategies for High-Efficiency Extraction, Ultra-Sensitive Detection of PFAS from Groundwater with Novel Adsorbents Using Fluorous Affinity**

Xin Geng*, Takuya Kubo

(Graduate School of Life and Environmental Science, Kyoto Prefectural University)

PO-27 **A NOVEL PIM SAMPLING PROBE FOR ELECTRIC FIELD-ENHANCED DRUG EXTRACTION FROM BIOLOGICAL FLUID**

Thien Hee Liew[1,2], Woei Jye Lau[3,4], Pei Sean Goh[3,4], Muhammad Firdaus Omar[5], Michael C. Breadmore[6], Ahmad Fauzi Ismail[3,4], Hong Heng See[1,2]

(Centre for sustainable nanomaterials, Ibnu Sina Institute for Scientific and Industrial Research, Universiti Teknologi Malaysia[1], Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia[2], Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia[3], Advanced Membrane Technology Research Centre (AMTEC), Universiti Teknologi Malaysia[4], Department of Physic, Faculty of Science, Universiti Teknologi Malaysia[5], Australian Centre for Research on Separation Science (ACROSS), School of Natural Sciences, University of Tasmania[6])

PO-28 **LC-MS-Based Comprehensive Lipidomic Analysis of Plant-derived Exosome-Like Nanoparticles from Flower Petals**

Hikaru R. Takaya*[a], Mizuki Yoshihara[a], Ayaka Sato[a], Yoshihiro Sasaki[b], Masanao Yoshimoto[c], Hidenori Takahashi[d]

(Department of Health and Life Sciences, Teikyo University of Science[a], Graduate School of Engineering, Kyoto University[b], Antimicrobial Technology[c], MS Business Unit, Life Science Business Department, Analytical & Measuring Instruments Division, Shimadzu[d])

PO-29 **Development of molecularly imprinted polymers recognizing folic acid in aqueous systems for the separation of folic acid-modified liposomes**

Kosuke Tsukada*, Takuya Kubo

(Graduate school of Life and Environmental Science, Kyoto Prefectural University)

PO-30 **Temperature Responsive Mixed Mode Chromatography for Effective Separation of Ionic Biomolecules and Proteins**

Kenichi Nagase*[a,b], Sakiko Kitazawa[b], Maria Watanabe[b], Fumihiko Zen[b] Hideko Kanazawa[b]

(Graduate School of Biomedical and Health Sciences, Hiroshima University[a], Faculty of Pharmacy, Keio University[b])

PO-31 A Rapid and Efficient Screening Method Development of Secondary Metabolites using LC-Raman

Kana Matsuoka[*[a, b]], Masahiro Ando[[c]], Takuji Nakashima[[c, d]], Shunnosuke Suwa[[a]], Haruko Takeyama[[a, c, e]]

(Graduate School of Advanced Science and Engineering, Waseda University[[a]], Shimadzu Corporation[[b]], Research Organization for Nano and Life Innovation, Waseda University[[c]], Department of Field Sciences, University of Human Environments[[d]], Institute for Advanced Research of Biosystem Dynamics, Graduate School of Advanced Science and Engineering, Waseda Research Institute for Science and Engineering, Waseda University[[e]])

PO-32 Functional Polymer Modified Interfaces for Cell Separation

Kazutaka Nishikawa[[a]], Reona Kamidoi[[a]], Kenichi Nagase[*[a,b]]

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PO-33 Evaluation of the behavior for fluorous affinity using HPLC

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PO-34 Development and Optimization of a Novel Silica-Titania Monolithic Stationary Phase for Capillary Liquid Chromatography

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PO-35 Development of a separation platform for biopharmaceuticals using a spongy like polymer

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PO-36 Liquid Chromatographic Separation of H/D Isotopologues Enabled by Aromatic π Interactions

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PO-37 Development of Dendrimer-type Monolithic Capillary Stationary Phases for Mixed-mode Chromatography

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PO-38 Examination of Analytical Conditions for Synthetic Peptides

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PO-39 Development of Novel Organic Reaction Field for The Compounds with Catechol Structure using Triptycene Based Polymer

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PO-40 Development of Multi-Dimensional HPLC Systems for the Analysis of Fermentation Related D-Amino Acids in Food/Beverage Samples

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PO-41 Development of a Two-Dimensional Chiral LC-MS/MS System for the Determination of Alanine, Aspartic Acid and Serine Residues in Proteins Exposed to Stress Conditions

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PO-42 Development of a Two-Dimensional HPLC System for the Determination of Alanylalanine Stereoisomers in the Plasma of Mice with Renal Dysfunction

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PO-43 Three-Dimensional HPLC Analysis of Glutamic Acid Enantiomers in Mouse Testis and Related Tissues

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