

ISEC 2014

International Solvent Extraction Conference

PROGRAMME

07 – 11 September 2014
Congress Center Würzburg (CCW) · Germany

ISEC 2014 International Solvent Extraction Conference

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DECHEMA

Gesellschaft für Chemische Technik
und Biotechnologie e.V.

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PROGRAMME AT A GLANCE

Sunday, September 07, 2014

9:00	Course
12:00	ISCE Meeting
17:00	Registration
18:00	OPENING CEREMONY
18:15	EVENING LECTURE
19:15	Welcome Reception
21:00	



PROGRAMME AT A GLANCE

Monday, September 08, 2014

	Session A	Session B	Session C	Session D
8:30	B. Moyer – Oak Ridge National Laboratory/USA			
9:15	COFFEE AND SNACKS			
9:45	T. Vander Hoogerstraete University of Leuven/B	T. Todd Idaho National Laboratory/USA	D. Bourgeois ICSM/F	A. Holbach TU Dortmund/D
10:10	J. Quinn Australian Nuclear Science and Technology Organisation/AUS	K. Nash Washington State University/USA	J. Mendez-Quezada Universidad de Guanajuato/MEX	J. Hereijgers Vrije Universiteit Brussel/B
10:35	J. Yang Chalmers University of Technology/S	C. Marie CEA/F	M. Mohammadi KTH Royal Institute of Technology/S	J. Tan Tsinghua University/CHN
11:00	M.A. Halim Process Research ORTECH Inc./CDN	A. Wilden Forschungszentrum Jülich GmbH/D	P. Hewitson Brunel University/UK	G. Liu Tsinghua University/CHN
11:25	R. Egashira Tokyo Institute of Technology/J	C. Wagner Universität Heidelberg/D	C.A. Hawkins University of California/USA	K. Smith The University of Melbourne/AUS
11:50	LUNCH			
13:20	A. Geist – Karlsruhe Institute of Technology/D			
13:50	B. Rüngeler – RWTH Aachen/D			
14:20	COFFEE			
14:50	C. Tunsu University of Technology, Göteborg/S	H. Galán Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Madrid/E	P. Chuttrakul Graz University of Technology/A	Y. Miyazaki Japan Atomic Energy Agency/J
15:15	K. Huang Chinese Academy of Sciences/CHN	R. Taylor National Nuclear Laboratory/UK	H. Watarai Osaka University/J	M. Awual Japan Atomic Energy Agency/J
15:40	M. Goto Kyushu University, Fukuoka/J	A. Wilden Forschungszentrum Jülich GmbH/D	K. Wieszczycka Poznan University of Technology/PL	Y. Wang Tsinghua University/CHN
16:05	K. Larmour-Ship Tenova Bateman Technologies, Yokneam/IL	J. Law Idaho National Laboratory/USA	Y. Baba University of Miyazaki/J	G. Hellé, C. Mariet CEA Saclay/F
16:30	COFFEE AND SNACKS			
17:00	G.Q. Zhang Central South University/CHN	R. Berlemont CEA Marcoule/F	O. Riechert TU Dortmund/D	P.R. Martins Bento University of Utah, Salt Lake City/USA;
17:25	L. Zeng Central South University/CHN	M.C. Charbonnel CEA/F	E.V. Yurtov Mendeleev University of Chemical Technology of Russia/RUS	C. Priest University of South Australia/AUS
17:55	V. Vanel CEA/F	K. Takeshita Tokyo Institute of Technology/J	I. Ortiz University of Cantabria/E	W. De Malsche Vrije Universiteit/B
18:20	COFFEE			
18:20	POSTER PARTY			

PROGRAMME AT A GLANCE

Tuesday, September 09, 2014

	Session A	Session B	Session C	Session D
8:30	E. Paatero – Outotec Oyj/FIN			
9:15	COFFEE AND SNACKS			
9:45	S. Schlosser Slovak University of Technology/SK	D. Dherbecourt CEA/F	E.W. Barega Eindhoven University of Technology/NL	C. Ladd Effio Karlsruhe Institute of Technology (KIT)/D
10:10	P. Lozano University of Murcia/E	R.F. Engberg University of Paderborn/D	J. Vissers Spinid B.V./NL	J. Mündges TU Dortmund/D
10:35	A. Urtiaga University of Cantabria/E	M. Kraume TU Berlin/D	R. Schulz TU Dortmund/D	C. Brandenbusch TU Dortmund/D
11:00	M. Dietz University of Wisconsin/USA	O. Diat ICSM/F	A. Salum Universidade Federal de Minas Gerais/BR	E. Alvarez-Guerra Universidad de Cantabria/E
11:25	M. Gramblicka University of Twente/NL	T. Grunert TU Berlin/D	A. Bednarz RWTH Aachen	A. Sutherland Brunel University/UK
11:50	LUNCH			
13:50	EXCURSION			



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PROGRAMME AT A GLANCE

Wednesday, September 10, 2014

	Session A	Session B	Session C	Session D
8:30	F. Chemat – Avignon University/F			
9:15	COFFEE AND SNACKS			
9:45	K. Soldenhoff ANSTO/AUS	E. Cvetkovic Graz University of Technology/A	B. Bol Graz University of Technology/A	L. Hung CEA Marcoule,/F
10:10	D. Singh Bhabha Atomic Research Centre/IND	H. Chen East China University of Science and Technology/CHN	R. Orozco Mena Autonomous University of Chihuahua/MEX	V. Herdegen TU Bergakademie Freiberg/D
10:35	A. Chagnes ENSCP/F	F. Gebauer TU Kaiserslautern/D	A. Sicaire Université d'Avignon et Pays du Vaucluses/F	K. Ohto Saga University/J
11:00	O. Pecheur Commissariat à l'Energie Atomique de Marcoule/F	J. Villwock TU Berlin/D	H.F. Almeida-Trasviña Autonomous University of Chihuahua/MEX	G. Cote ENSCP/F
11:25	G. Bernier CEA/F	J. Kamp TU Berlin/D	Y. Saotome University, Kameino/J	L. Li Tsinghua University/CHN
11:50	LUNCH			
13:20	M.W. Hlawitschka – University of Kaiserslautern/D			
13:50	J. Herguijuela – Sulzer Chemtech AG/CH			
14:20	COFFEE			
14:50	S. Archer DRA Mineral Projects (Pty) Ltd/ZA	J.P. Simonin Université P.M. Curie, Paris/F	Y. Du University of Twente/NL	E. Sanz IFP Energies nouvelles/F
15:15	N. Davidson Johnson Matthey/UK	R. Poirot CEA/ICSM/LCPA/F	F. Deng Chinese Academy of Sciences/CHN	E. Aksamija TU Graz/A
15:40	J. Yang Chalmers University of Technology/S	A. Ochkin Mendeleev University of Chemical Technology/RUS	S. Bassil Laboratoire de Chimie Agro-Industrielle/F	S. Charton CEA/F
16:05	R. Luckay University of Stellenbosch/ZA	A. Klamt COSMOlogic GmbH & Co. KG/D	P. Hewitson Brunel University/UK	Z. Sun East China University of Science and Technology/CHN
16:30	COFFEE AND SNACKS			
17:00	M. Siebenhofer Graz University of Technology/A	N. Paul TU Berlin/D	K. Nash Washington State University/USA	S. Miskovic University of Utah/USA
17:25	J. Lipp Tenova Bateman Technologies, Yokneam/IL	S. Assmann Curtin University/AUS	Y. Sasaki Japan Atomic Energy Agency/J	E. Keshavarz Alamdari, Amirkabir University of Technology/IR
17:55	J.P.J. Matinheikki Outotec (Finland) Oy/FIN	H. Cui Chinese Academy of Sciences, Changchun/CHN	C. Sorel CEA/F	E. Keshavarz Alamdari, Amirkabir University of Technology/IR
19:00 – 23:00	CONFERENCE DINNER			

PROGRAMME AT A GLANCE

Thursday, September 11, 2014

	Session A	Session B	Session C	Session D
8:30	R. Grant – Johnson Matthey Technology Centre/UK			
9:15	COFFEE AND SNACKS			
9:45	Z. Zhu CSIRO/AUS	B. Moyer Oak Ridge National Laboratory/USA	M. Haneke Evonik Industries AG/D	P. Zalupski Idaho National Laboratory,/USA
10:10	A. Salum Universidade Federal de Minas Gerais/BR	C. Phillips EnergySolutions plc,/USA	M. Weber Ineos Phenol GmbH/D	L. Berthon CEA Marcoule, Bagnols-sur-Geze/F
10:35	M. Tanaka National Institute of Advanced Industrial Science and Technology/J	K. Nee University of California Irvine/USA	Y. Wang University of Melbourne/AUS	H. M. Krieg North-West University/ZA
11:00	Y. Baba Kyushu University, Fukuoka/J	S.P. Mezyk California State University/USA	A. Boam Evonik Membrane Extraction Technology Ltd./UK	A. Paiva University of Lisbon/P
11:25	F. Rashchi University of Tehran/IR	M. Nilsson University of California/USA	A. Matsuoka Kobe Steel, LTD./J	P. Tasker University of Edinburgh/UK
11:50	LUNCH			
13:20	B. Ballestrin – Uranium One/AUS			
13:50	AWARD SESSION			
14:20	COFFEE			
15:20	A. Sarrafi Shahid Bahonar University of Kerman/IR	G.J. Lumetta Pacific Northwest National Laboratory, Richland, WA/USA	S. Dourdain University of Montpellier/F	S. Ignatova Brunel University/UK
15:45	A. Trofimenko Belarusian State University/BY	J. Pearson University of California/USA	M. Ranjbar University of Kerman/IR	D. Glatz Koch Modular Process Systems, LLC/USA
16:10	E. Pecharroman Tecnicas Reunidas, /E	S. Mezyk California State University/USA	M.F. Vancas Tenova Bateman Technologies MESA/USA	P. Scherübel Graz University of Technology/A
16:40	H. Hein Oryxeio Ingeniería Limitada, Providencia/RCH	M. Ozawa Tokyo Institute of Technology/J	K. Babic DSM/NL	N. Dobrin Tenova Bateman Technologies/IL
17:10	CLOSING CEREMONY			
17:20	End of Conference			

Monday, September 08, 2014

room	
08:30	Strategies for selective liquid-liquid anion exchange B. Moyer, Oak Ridge National Laboratory, TN/USA
09:15	Coffee and Snacks
room	room
Session	Session
09:45	Ionic liquid technology for metal separation and NdFeB magnet recycling T. Vander Hoogerstraete, K. Binnemans, University of Leuven, Heverlee/B
10:10	Separation of trivalent actinides from lanthanides: current progress and trends T. Todd, Idaho National Laboratory, Idaho Falls, ID/USA
10:35	Synthesis and characterization of a new nitrogen-containing ligand for actinide/lanthanide separations K. Nash, J. Muller, Washington State University, Pullman, WA/USA
10:35	Recovery of In, Y, Nd and Eu from WEEE by solvent extraction J. Yang, C. Ekberg, T. Retegan, Chalmers University of Technology, Gothenburg/S
11:00	Separation of americium from a concentrated raffinate by liquid-liquid extraction C. Marie, M.-T. Duchesne, CEA, Bagnols sur Cèze/F; S. Watanabe, JAEA, Tokai Mura/J; V. Pacary, V. Vanel, M. Montuir, D. Rudloff, M. Bertrand, M. Miguiditchian, CEA, Bagnols sur Cèze/F
11:00	Innovative process for the recovery of rare earth elements using mixed chloride leach process V.I. Lakshmanan, R. Sridhar, J. Chen, M.A. Halim, Process Research ORTECH Inc., Mississauga/CDN
11:25	Spiked laboratory-scale continuous counter-current centrifugal contactor demonstration of a novel innovative-SANEX process A. Wilden, G. Modolo, P. Kaufholz, F. Sadowski, S. Lange, M. Sypula, D. Bosbach, Forschungszentrum Jülich GmbH/D; D. Magnusson, U. Müllich, A. Geist, Karlsruhe Institute of Technology (KIT)/D
11:25	Effects of operating conditions in the solvent extraction process to separate rare earth metals R. Egashira, H. Habaki, Tokyo Institute of Technology, Meguro/J
11:50	Lunch

Monday, September 08, 2014

room	
08:30	Strategies for selective liquid-liquid anion exchange B. Moyer, Oak Ridge National Laboratory, TN/USA
09:15	Coffee and Snacks
room	room
Session	Session
09:45	Fluorinated malonamides for L/L extraction of f-elements M.C. Dul, D. Bourgeois, S. Dourdain, S. Pellet-Rostaing, D. Meyer, ICSM, Bagnols-sur-ceze/F
10:10	Process development of enantioselective extraction of aromatic acids in intensified lab columns A. Holbach, J. Godde, N. Kockmann, TU Dortmund/D
10:10	Liquid-liquid extraction of Rh(III) from chloride medium using tetralkyl phosphonium salts as extractants J. Mendez-Quezada, D. Cholico-Gonzalez, S. Gutiérrez-Granados, P. Gonzalez, R. Navarro, I. Saucedo, Universidad de Guanajuato/MEX; C. Ponce de León, University of Southampton/UK; M. Avila-Rodriguez, Universidad de Guanajuato/MEX
10:35	A flat channel membrane microcontactor for liquid-liquid extraction J. Hereijgers, Vrije Universiteit Brussel/B; T. Breugelmanns, University of Antwerp/B; W. De Malsche, Vrije Universiteit Brussel/B
10:35	Investigation of carriers for supported liquid membrane extraction of rare earth elements M. Mohammadi, J. Martínez, K. Forsberg, A. Rasmuson, KTH Royal Institute of Technology, Stockholm/S
11:00	Process intensification of high-phase-ratio extraction with gas-liquid-liquid microdispersion system J. Tan, J.H. Xu, G.S. Luo, Tsinghua University, Beijing/CHN
11:00	Intermittent counter-current extraction in continuous downstream processing P. Hewitson, I.A. Sutherland, S. Ignatova, Brunel University, Uxbridge/UK
11:25	Intensification of mass transfer by coupling membrane dispersion and microbeads packed column for high two-phase ratio system G. Liu, J. Tang, G.S. Luo, Tsinghua University, Beijing/CHN
11:25	Investigations of water-soluble Schiff base ligands for the separation of actinyl and non-actinyl cations C.A. Hawkins, C. Bustillos, University of California Irvine, CA/USA; R. Copping, I. May, Los Alamos National Laboratory, NM/USA; M. Nilsson, University of California Irvine, CA/USA
11:50	Lunch

Monday, September 08, 2014

room	
13:20	The hydrometallurgical co-separation of neptunium, plutonium, americium, and curium by the EURO-GANEX process R. Malmbeck, European Commission, Joint Research Centre, ITU, Karlsruhe/D; M. Carrott, National Nuclear Laboratory, Sellafield/UK; A. Geist, Karlsruhe Institute of Technology (KIT)/D; X. Hérès, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Marcoule/F; D. Magnusson, Karlsruhe Institute of Technology (KIT)/D; G. Modolo, Forschungszentrum Jülich GmbH/D; C. Sorel, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Marcoule/F; R. Taylor, National Nuclear Laboratory, Sellafield/UK; A. Wilden, Forschungszentrum Jülich GmbH/D
13:50	Liquid-liquid extraction design under uncertainty B. Rüngeler, RWTH Aachen/D; A. Pfennig, TU Graz/A
14:20	Coffee
room	room
14:50	Recovery of La, Ce, Eu, Gd, Tb and Y from fluorescent lamp waste using solvent extraction: solvent choice studies C. Tunsu, C. Ekberg, M. Gregoric, T. Retegan, Chalmers University of Technology, Göteborg/S
15:15	Kinetic non-equilibrium extraction and separation of praseodymium and neodymium by a novel gas-assistant column extractor K. Huang, H.Z. Liu, Chinese Academy of Sciences, Beijing/CHN
15:40	New extractants applicable to industrial solvent extraction process for rare metal separation M. Goto, Y. Baba, F. Kubota, Kyushu University, Fukuoka/J
16:05	Continuous piloting to recover nickel from caldag nikel leach solution using the Nicksyn™ and versatic 10 acid synergistic solvent extraction system K. Larmour-Ship, Tenova Bateman Technologies, Yokneam/IL; C. Er, Caldag Nikel, Manisa/TR; M. Koetze, Mintek, Johannesburg/ZA; A.C. du Preez, Mintek, Johannesburg/ZA
16:30	Coffee and Snacks

Monday, September 08, 2014

room	
13:20	The hydrometallurgical co-separation of neptunium, plutonium, americium, and curium by the EURO-GANEX process R. Malmbeck, European Commission, Joint Research Centre, ITU, Karlsruhe/D; M. Carrott, National Nuclear Laboratory, Sellafield/UK; A. Geist, Karlsruhe Institute of Technology (KIT)/D; X. Hérès, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Marcoule/F; D. Magnusson, Karlsruhe Institute of Technology (KIT)/D; G. Modolo, Forschungszentrum Jülich GmbH/D; C. Sorel, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Marcoule/F; R. Taylor, National Nuclear Laboratory, Sellafield/UK; A. Wilden, Forschungszentrum Jülich GmbH/D
13:50	Liquid-liquid extraction design under uncertainty B. Rüngeler, RWTH Aachen/D; A. Pfennig, TU Graz/A
14:20	Coffee
room	room
14:50	Analyzing the sedimentation and coalescence behavior of polydisperse droplets in opaque systems using ultrasonic technique P. Chuttrakul, A. Pfennig, Graz University of Technology/A
15:15	Novel magnetic and optical measurements of liquid-liquid interfacial reactions H. Watarai, Osaka University/J
15:40	Zinc(II) ions recovery from multimetal acidic chloride solutions using pyridinium ketoximes K. Wieszczycka, A. Wojciechowska, M. Krupa, Poznan University of Technology/PL
16:05	Synthesis of a new extractant with phenyl-phosphinic acid and selective extraction of In(III) and Ga(III) over Zn(II) from acidic media Y. Baba, A. Koshimoto, T. Oshima, University of Miyazaki/J
16:30	Coffee and Snacks

PROGRAMME

Monday, September 08, 2014

	room	room
17:00	A clean production process for tungsten hydrometallurgy based on the new technology of direct solvent extraction from alkaline medium G.Q. Zhang, W.J. Guan, L.S. Xiao, Q.X. Zhang, Central South University, Changsha/CHN	Kinetics extraction of uranium(VI) and plutonium(IV) by N,N-dialkylamides using the single drop method R. Berlemont, A. Lelias, M. Miguirditchian, CEA Marcoule, Bagnols-sur-Ceze/F; J.-P. Simonin, Université P-M. Curie, Paris/F
17:25	Direct solvent extraction of nickel from sulfuric acid leach solution of laterite with a new extractant of HBL110 G.Q. Zhang, L. Zeng, L.S. Xiao, Q.G. Li, Z.Y. Cao, Central South University, Changsha/CHN	New thermodynamics data related to actinides separation M.C. Charbonnel, N. Boubals, F. Rodrigues, L. Berthon, P. Guilbaud, CEA, Bagnols-sur-ceze/F
17:55	Modeling and simulation of molybdenum extraction by ion-exchanger and solvating extractant V. Vanel, V. Pacary, C. Marie, L. Berthon, M.T. Duchesne, D. Rudloff, M. Bertrand, CEA, Bagnols-sur-ceze/F; S. Watanabe, JAEA, Tokai-mura/J	Extraction chromatographic separation of Am(III) and Eu(III) by porous silica coating TPPEN-NIPA Gel (2) chromatographic column tests K. Takeshita, H. Oaki, Tokyo Institute of Technology/J; T. Yaita, S. Suzuki, S. Koyama, Japan Atomic Energy Agency, Tokai/J; A. Mori, Kobe University/J
18:20	Coffee	
18:20	POSTER PARTY	

PROGRAMME

Monday, September 08, 2014

	room	room
17:00	Phase equilibria of innovative solvent systems for homogenous catalysis O. Riechert, T. Zeiner, G. Sadowski, TU Dortmund/D	Comprehensive numerical and experimental analysis of copper solvent extraction in Y-Y microreactors P.R. Martins Bento, University of Utah, Salt Lake City, UT/USA; O. Kazemi, Amirkabir University of Technology, Tehran/IR; S. Miskovic, University of Utah, Salt Lake City, UT/USA
17:25	DEHPA and TBP-containing microemulsions of sodium bis(2-ethylhexyl)phosphate E.V. Yurtov, N.M. Murashova, S.Yu. Levchishin, D. Mendelev University of Chemical Technology of Russia, Moscow/RUS	Extraction and throughput for micro-solvent extraction of platinum using a single chip and a multi-chip module C. Priest, F.H. Kriel, S.F. Hashmi, L. Parkinson, J. Ralston, University of South Australia, Mawson Lakes/AUS; S. Woollam, N. Plint, Anglo Research, Germiston/ZA; R.A. Grant, P. Ash, Johnson Matthey Technology Centre, Reading/UK
17:55	Polymer/ionic liquid composite membranes for olefin selective separation D. Gorri, R. Zarca, A. Ortiz, I. Ortiz, University of Cantabria, Santander/E	Membrane microcontactors for multi-stage countercurrent extraction J. Hereijgers, Vrije Universiteit Brussel/B; T. Breugelmans, University of Antwerp/B; W. De Malsche, Vrije Universiteit Brussel/B
18:20	Coffee	
18:20	POSTER PARTY	

Tuesday, September 09, 2014

room	
08:30	Recovery of minor metals from secondary sources using solvent extraction E. Paatero, Outotec Oyj, Espoo/FIN; S. Virolainen, Lappeenranta University of Technology/FIN
09:15	Coffee and Snacks
room	
Session A	Session B
09:45	Specific phenomena in extraction of organic acids with ionic liquids and formulation of solvents for extractive separations S. Schlosser, M. Blahusiak, J. Marták, Slovak University of Technology, Bratislava/SK
10:10	Sponge-like ionic liquids. A new platform for synthesis and pure product separation P. Lozano, J.M. Bernal, University of Murcia/E; E. Garcia-Verdugo, University Jaume I, Castellon/E; G. Sanchez, University of Murcia/E; M.I. Burguete, S.V. Luis, University Jaume I, Castellon/E
10:35	Design of novel ionic liquids solvents for the selective recovery of carbon monoxide G. Zarca, I. Ortiz, A. Urtiaga, University of Cantabria, Santander/E
11:00	Factors influencing the modes of metal ion partitioning into room-temperature ionic liquids M. Dietz, University of Wisconsin – Milwaukee, WI/USA
11:25	Kinetics and mechanism of enantioselective extraction of amino acid by organometallic complex M. Gramblicka, S.R.A. Kersten, University of Twente, Enschede/NL; H.J. Heeres, University of Groningen/NL; B. Schuur, University of Twente, Enschede/NL
11:50	Lunch
13:50	Excursion

Tuesday, September 09, 2014

room	
08:30	Recovery of minor metals from secondary sources using solvent extraction E. Paatero, Outotec Oyj, Espoo/FIN; S. Virolainen, Lappeenranta University of Technology/FIN
09:15	Coffee and Snacks
room	
Session C	Session D
09:45	Evaluation of a hydrocyclone technology for separation of industrial extraction systems E.W. Barega, E. Zondervan, A.B. de Haan, Eindhoven University of Technology/NL; W. Hoek, Lyondell Basell, Rotterdam/NL; K. Babic, DSM, Geleen/NL
10:10	Operating window of a multistage rotor-rotor spinning disc extractor J. Vissers, R. van Kouwen, Spinid B.V., Eindhoven/NL; K. Babic, DSM, Geleen/NL; J.C. Schouten, J. van der Schaaf, Eindhoven University of Technology/NL
10:35	Investigation of the reactive extraction of terpenylamines with an acid-base reaction R. Schulz, R. Bongard, B. Szymplinski, T. Zeiner, A. Górak, TU Dortmund/D
11:00	Citric acid extraction by liquid surfactant membranes in a continuous pilot plant C. Konzen, J.S. Barbosa, Universidade Federal de Minas Gerais, Belo Horizonte/BR; L.C. Meira-Melo, Centro de Desenvolvimento de Tecnologia Nuclear, Belo Horizonte/BR; E.M.R. Araújo, J.C. Balarini, T.L.S. Miranda, A. Salum, Universidade Federal de Minas Gerais, Belo Horizonte/BR
11:25	The use of option trees for the selection of solvents and reactive extractants for the design of biocompatible separation processes A. Bednarz, RWTH Aachen/D; P. Scherübel, TU Graz/A; A. Spieß, RWTH Aachen/D; A. Pfennig, TU Graz/A
11:50	Lunch
13:50	Excursion

Wednesday, September 10, 2014

room	
08:30	Green solvents for natural products extraction F. Chemat, Avignon University/F
09:15	Coffee and Snacks
room	
Session A	Session B
09:45	Process for uranium recovery from mixed sulfate/chloride media J. Quinn, K. Soldenhoff, ANSTO, Sydney/AUS
	Combined sedimentation and mass-transfer experiments with a concentration gradient in the continuous phase E. Cvetkovic, A. Pfennig, Graz University of Technology/A
10:10	Enhanced extraction of uranium from phosphoric acid with synergistic solvent mixture of DNPPA and bidentate octyl (phenyl) CMPO D. Singh, S. Mondal, M. Anitha, J. Sharma, H. Singh, Bhabha Atomic Research Centre, Mumbai/IND
	Prediction of holdup, droplet diameter and axial mixing in a rotating disc contactor H. Chen, Z. Sun, G. Lu, X. Song, J. Yu, East China University of Science and Technology, Shanghai/CHN
10:35	Revisited physicochemistry of uranium (VI) extraction from wet phosphoric acid by DzEHPA-TOPO D. Beltrami, G. Cote, ENSCP, Paris/F; H. Mokhtari, B. Courtaud, Areva, Bessines sur Gartempe/F; A. Chagnes, ENSCP, Paris/F
	Ionic influence on coalescence and repulsion behavior in liquid-liquid dispersions F. Gebauer, TU Kaiserslautern/D; J. Villwock, J. Kamp, TU Berlin/D; H.-J. Bart, TU Kaiserslautern/D; M. Kraume, TU Berlin/D
11:00	Comprehension of synergistic mechanisms for uranium extraction from phosphoric ores O. Pecheur, D. Guillaumont, Commissariat à l'Energie Atomique de Marcoule, Bagnols-sur-ceze/F; S. Dourdain, Institut de Chimie Séparative de Marcoule, Bagnols-sur-ceze/F; F. Testard, Commissariat à l'Energie Atomique de Saclay, Gif-sur-Yvette/F
	Influence of ion species and ionic strength on the dynamic coalescence of single drops J. Villwock, J. Kamp, M. Kraume, TU Berlin/D; F. Gebauer, H.-J. Bart, TU Kaiserslautern/D
11:25	New process for the selective extraction of uranium from phosphoric ores G. Bernier, M. Miguiditchian, C. Balaguer, X. Hérès, V. Pacary, M. Bertrand, B. Camès, CEA, Bagnols-sur-ceze/F; H. Mokhtari, AREVA NC, Bessines-sur-Gartempe/F
	Impact of drop size and relative velocity on coalescence in liquid/liquid dispersions J. Kamp, J. Villwock, M. Kraume, TU Berlin/D
11:50	Lunch
room	
13:20	1D to 3D CFD extraction column design – state-of-the-art and future challenges M.W. Hlawitschka, H.-J. Bart, University of Kaiserslautern/D
13:50	Changing physical properties – a challenge for extraction equipment and processes J. Herguigueta, J. Koch, Sulzer Chemtech AG, Allschwil/CH
14:20	Coffee

Wednesday, September 10, 2014

room	
08:30	Green solvents for natural products extraction F. Chemat, Avignon University/F
09:15	Coffee and Snacks
room	
Session C	Session D
09:45	Optimizing plant-material extraction processes J.B. Bol, A. Pfennig, Graz University of Technology/A
	Supercritical carbon dioxide extraction of metals from sulphuric acid solutions L. Hung, A. Hertz, D. Hartmann, F. Charton, CEA Marcoule, Bagnols-sur-ceze/F; O. Boutin, Aix-Marseille Université, Aix en Provence/F
10:10	Solvent extraction optimization of added value components from oats: scale up perspective R. Orozco Mena, E. Ortega Rivas, S. Pérez Vega, Autonomous University of Chihuahua/MEX
	A new process design for lignite extraction by immersion M. Wollmerstädt, F. Fehse, V. Herdegen, H.-W. Schröder, TU Bergakademie Freiberg/D; T. Naundorf, ROMONTA Unternehmensgruppe, Seegebiet Mansfelder Land/D; J.-U. Repke, TU Bergakademie Freiberg/D
10:35	2-Methyl-tetrahydrofuran as alternative solvent for rapeseed oil extraction: lab and pilot scale A. Sicaire, Université d'Avignon et Pays du Vaucluses/F
	Lithium discriminating extraction with tripropyl-monoacetic acid derivative of calix[4]arene K. Ohto, H. Sadamatsu, S. Morisada, H. Kawakita, Saga University/J
11:00	Enhanced early stage solvent selection and evaluation in the extraction of peanut skin polyphenols S.A. Medina-González, H.F. Almeida-Trasviña, I. Salmerón-Ochoa, S.B. Pérez-Vega, Autonomous University of Chihuahua/MEX
	New reagents for uranium(VI) extraction from concentrated phosphoric acid D. Beltrami, A. Chagnes, ENSCP, Paris/F; H. Mokhtari, B. Courtaud, Areva, Bessines sur Gartempe/F; G. Cote, ENSCP, Paris/F
11:25	Extraction of apigenin from dried parsley (Petroselinum crispum L.) powder by water, organic solvent and supercritical carbon dioxide Y. Saotome, M. Imai, Nihon University, Kameino/J
	Synthesis of high purity didecylphosphinic acid for extraction of heavy rare earth L. Li, S. Xu, X. Wang, X. Liu, Tsinghua University, Beijing/CHN
11:50	Lunch
room	
13:20	1D to 3D CFD extraction column design – state-of-the-art and future challenges M.W. Hlawitschka, H.-J. Bart, University of Kaiserslautern/D
13:50	Changing physical properties – a challenge for extraction equipment and processes J. Herguigueta, J. Koch, Sulzer Chemtech AG, Allschwil/CH
14:20	Coffee

Wednesday, September 10, 2014

	room	room
	Session A	Session B
14:50	Solvent extraction versus nano-filtration for upgrading uranium and recovery of acid from an ion exchange eluate S. Archer, V. Coetzee, DRA Mineral Projects (Pty) Ltd, Johannesburg/ZA; A. Feather, BASF, Johannesburg/ZA; A. Manis, ANSTO, Sydney/AUS	Kinetics of liquid/liquid extraction of europium(III) cation by two malonic diamides J.P. Simonin, Université P.M. Curie, Paris/F
15:15	Novel solvent extraction process for the recovery of gold from chloride media N. Davidson, B. Eade, R.A. Grant, Johnson Matthey, Reading/UK	Palladium-malonamides: molecular aspects of L/L extraction R. Poirot, CEA/ICSM/LCPA, Bagnols-sur-Ceze/F; D. Bourgeois, CNRS/ICSM/LCPA, Bagnols-sur-Ceze/F; D. Meyer, CEA/ICSM/LCPA, Bagnols-sur-Ceze/F
15:40	Metal separation from e-waste by solvent extraction with CYANEX 471X J. Yang, S. Kosaraju, C. Ekberg, S. Allard, T. Retegan, Chalmers University of Technology, Gothenburg/S	Nitric acid extraction with 30% and 12% TBP solutions in n-dodecane A. Ochkin, S. Nekhaevskiy, Mendeleev University of Chemical Technology, Moscow/RUS
16:05	Outer-sphere coordination chemistry: use of amido-ammonium ligands as selective extractants for precious metals R. Luckay, University of Stellenbosch/ZA; P. Tasker, G. Murray, M.A. Wilson, W. Roebuck, J.R. Turkington, J.B. Love, University of Edinburgh/UK	COSMO-RS as a powerful tool for solvent screening and liquid extraction simulation A. Klamt, F. Eckert, J. Reinisch, COSMOlogic GmbH & Co. KG, Leverkusen/D
16:30	Coffee and Snacks	
17:00	Recycling of Co₂⁺, Cu₂⁺ and Li⁺ from Li-ion battery scrap M. Siebenhofer, Graz University of Technology/A; H. Noll, AVL, Graz/A; M. Fritz, Epcos, Deutschlandsberg/A	Influences of interfacial phenomena on transport processes in micellar liquid/liquid systems N. Paul, S.-J. Kim, M. Kraume, TU Berlin/D
17:25	LiSXTM a new SX technology for lithium recovery J. Lipp, Tenova Bateman Technologies, Yokneam/IL	Electrostatically induced droplet agitation in solvent extraction S. Assmann, D. Ibana, Curtin University, Kalgoorlie/AUS; C. McRae, Macquarie University, Sydney/AUS
17:55	Modular Mixer-Settler technology for medium scale satellite mining operations J.P.J. Matinheikki, R.T. Saario, H.M. Fredriksson, Outotec (Finland) Oy, Espoo/FIN	Preparation of the novel ionic liquids functionalized resins with tunable structure for metal ions separation H. Cui, J. Chen, Y. Liu, Chinese Academy of Sciences, Changchun/CHN
19:00 23:00	Conference Dinner	

Wednesday, September 10, 2014

	room	room
	Session C	Session D
14:50	2-Dibutylaminoethanol as a switchable solvent for lipid extraction from <i>Desmodemus</i> sp. Y. Du, K. Tran, B. Schuur, D.W.F. Brilman, University of Twente, Enschede/NL	Experimental and CFD study of drop formation at high jet velocity E. Sanz, P. Béard, F. Augier, M. Le Möel, D. Leinekugel-Le-Cocq, A. Baudot, IFP Energies nouvelles, Solaize/F
15:15	Microwave-assisted and cloud point extraction and separation of active ingredients from natural products F. Deng, X. Liang, C. Hua, H. Liu, Chinese Academy of Sciences, Beijing/CHN	Hybridisation of Taylor-Couette reactors and RDC columns E. Aksamija, M. Siebenhofer, TU Graz/A
15:40	Valorization of Hemp Wood to obtain high value bioproducts S. Bassil, L. Candy, Laboratoire de Chimie Agro-Industrielle, Toulouse/F; A. Thuret, A. Masseron, Institut de Science des Matériaux de Mulhouse/F; V. Simon, C. Raynaud, Laboratoire de Chimie Agro-Industrielle, Toulouse/F	Modeling and study of the dispersed phase behaviour in a pulsed column A. Amokrane, S. Charton, CEA, Bagnols-sur-ceze/F; J.P. Klein, F. Puel, Université Lyon 1, Villeurbanne/F
16:05	Intermittent counter-current extraction in continuous downstream processing P. Hewitson, I.A. Sutherland, S. Ignatova, Brunel University, Uxbridge/UK	A modified rotating disc contactor to eliminate flow dead zones Z. Sun, H. Chen, G. Lu, P. Li, J. Yu, East China University of Science and Technology, Shanghai/CHN
16:30	Coffee and Snacks	
17:00	New dipicolinic acid derivatives for actinide-lanthanide separations K. Nash, C. Heathman, Washington State University, Pullman, WA/USA	Comprehensive numerical and experimental analysis of copper solvent extraction within Y-Y microreactors O. Kazemi, P. Ribeiro Martins Bento, S. Miskovic, University of Utah, Salt Lake City, UT/USA
17:25	Effect of the central frames and substituents attached to N atoms on extraction ability of podand-type extractants Y. Sasaki, Y. Kitatsuji, Y. Sugo, Y. Tsubata, T. Kimura, Y. Morita, Japan Atomic Energy Agency, Tokai/J	CFD simulation of Mixer-Settler systems; evaluation of the effect of fluid's velocity on the flow pattern and phase separation O. Kazemi, E. Keshavarz Alamdari, Amirkabir University of Technology, Tehran/IR
17:55	New developments with monoamide type extractants C. Sorel, M. Miguiditchian, CEA, Bagnols-sur-ceze/F	Simulation of organic drop coalescence in a hypothetical settler: effect of geometry and fluid parameters O. Kazemi, S. Parvizi, E. Keshavarz Alamdari, Amirkabir University of Technology, Tehran/IR
19:00 23:00	Conference Dinner	

Thursday, September 11, 2014

room	
08:30	The role of solvent extraction in platinum group metal refining – past, present and future R. Grant, Johnson Matthey Technology Centre, Reading/UK; S.F. Woollam, Anglo American's Technical Solutions, Johannesburg/Z.A
09:15	Coffee and Snacks
Session A	Session B
09:45	Separation of Fe(III) from a synthetic nickel laterite leach solution with high chloride concentration using DEDOA Z. Zhu, Y. Pranolo, C.Y. Cheng, CSIRO, Perth/AUS
10:10	Extraction of cobalt from a liquor rich in nickel by liquid surfactant membrane and liquid-liquid extraction techniques E.M.R. Araújo, C. Konzen, J.C. Balarini, T.L.S. Miranda, A. Salum, Universidade Federal de Minas Gerais, Belo Horizonte/BR
10:35	Effect of aqueous organic acids on the nickel extraction with LIX841 M. Tanaka, H. Narita, National Institute of Advanced Industrial Science and Technology, Tsukuba/J; H. Naganawa, Japan Atomic Energy Agency, Tokai/J; Y. Saiki, Japan Kanigen Co., Ltd., Ota/J
11:00	Development of novel extractants with amino acid structure for highly effective recovery and separation of nickel and cobalt ions Y. Baba, F. Kubota, N. Kamiya, M. Goto, Kyushu University, Fukuoka/J
11:25	Recovery of Ni and Cd from spent Ni-Cd batteries by acid leaching and a synergistic solvent extraction system using D2EHPA and cyanex 302 A. Babakhani, N. Heidari, F. Rashchi, N. Mostoufi, University of Tehran/IR
11:50	Lunch

Thursday, September 11, 2014

room	
08:30	The role of solvent extraction in platinum group metal refining – past, present and future R. Grant, Johnson Matthey Technology Centre, Reading/UK; S.F. Woollam, Anglo American's Technical Solutions, Johannesburg/Z.A
09:15	Coffee and Snacks
Session C	Session D
09:45	Application related design of liquid-liquid decanters of challenging technical systems M. Haneke, Evonik Industries AG, Marl/D; J. Leistner, Evonik Industries AG, Darmstadt/D; M. Mendorf, Evonik Industries AG, Marl/D
10:10	An approach to predict the dispersing efficiency in static mixers, centrifugal pumps and turbulent pipe flow will be presented M. Weber, Ineos Phenol GmbH, Gladbeck/D
10:35	Comparison of the model prediction and industrial data in pulsed disc doughnut extraction column Y. Wang, K.A. Mumford, University of Melbourne/AUS; S. Ballestrin, Uranium One Inc./AUS; K. Smith, T.F. Grabin, G.W. Stevens, University of Melbourne/AUS
11:00	OSN (Organic Solvent Nanofiltration) – a new technology for hybrid processes with solvent extraction A. Boam, Evonik Membrane Extraction Technology Ltd., Wembley/UK; A. Kobus, Evonik Industries AG, Marl/D; C. Schnitzer, I. Rocha, V. Koleva, Y. Bouwhuis, Evonik Membrane Extraction Technology Ltd., Wembley/UK
11:25	Stacked multi channel reactor for solvent extraction process A. Matsuoka, K. Noishiki, Kobe Steel, LTD./J
11:50	Lunch

PROGRAMME

Thursday, September 11, 2014

room	
13:20	Troubleshooting at Honeymoon – from trouble to success B. Ballestrin, Uranium One, Honeymoon/AUS; H. Aharon, B. Grinbaum, Bateman, Yokneam/IL
13:50	Award Session
14:20	Coffee
room	room
Session A	Session B
15:20	<p>The effect of properties of aromatics on diluent in copper extraction in solvent extraction process at Sarcheshmeh Copper Complex A. Sarrafi, Shahid Bahonar University of Kerman/IR; S. Daneshpajouh, Sarcheshmeh Copper Complex/IR</p> <p>Development of the actinide-lanthanide separation (ALSEP) process G.J. Lumetta, J.C. Carter, C.M. Niver, Pacific Northwest National Laboratory, Richland, WA/USA; A.V. Gelis, Argonne National Laboratory, IL/USA</p>
15:45	<p>Extraction of Zn(II), Cd(II), Hg(II) and Co(II) by a high quaternary ammonium salts A. Trofimenko, A. Gulevich, Belarusian State University, Minsk/BY</p> <p>High LET radiolytic degradation of solvent extraction processes for used nuclear fuel J. Pearson, M. Nilsson, University of California Irvine, CA/USA</p>
16:10	<p>Mooresboro zinc project: first solvent extraction plant in the world to produce zinc entirely from recycling G. Diaz, E. Pecharroman, S. Sanguilinda, Técnicas Reunidas, Madrid/E; J. Pusateri, Horsehead Corporation, Pittsburgh, PA/USA</p> <p>The radiation chemistry of CMPO S. Mezyk, California State University, Long Beach, CA/USA; B.J. Mincher, Idaho National Laboratory, Idaho Falls, ID/USA; M. Nilsson, J. Pearson, California State University, Irvine, CA/USA; J. LaVerne, University of Notre Dame, IN/USA</p>
16:40	<p>Operational and design features related to copper solvent extraction wash stages H. Hein, R. Hein, Oryxeo Ingeniería Limitada, Providencia/RCH</p> <p>Adsorption characteristics of fission product elements constituting high level liquid wastes for macro-cyclic resins M. Ozawa, T. Kaneshiki, Tokyo Institute of Technology//; T. Sychra, Slovak University of Technology, Bratislava/SK; M. Nomura, Tokyo Institute of Technology//; Y. Ohishi, T. Sakurai, Atox, Tokyo/J</p>
17:10	Closing Ceremony
17:20	End of Conference

PROGRAMME

Thursday, September 11, 2014

room	
13:20	Troubleshooting at Honeymoon – from trouble to success B. Ballestrin, Uranium One, Honeymoon/AUS; H. Aharon, B. Grinbaum, Bateman, Yokneam/IL
13:50	Award Session
14:20	Coffee
room	room
Session C	Session D
15:20	<p>About the origin of “synergism” in ion selectivity in metal salt extraction by microemulsions S. Dourdain, S. Pellet-Rostaing, D. Meyer, University of Montpellier 2, Bagnols-sur-ceze/F</p> <p>API recovery from pharmaceutical waste streams by continuous countercurrent extraction S. Ignatova, P. Hewitson, I.A. Sutherland, Brunel University, Uxbridge/UK; P. Wood, Dynamic Extractions Ltd., Uxbridge/UK; N. Douillet, C. Thickett, D. Johns, K. Freebairn, GlaxoSmithKline, Stevenage/UK</p>
15:45	<p>Successful pilot plant extraction of copper from low grade chalcopyrite ore by bioleaching with moderate thermophilic cultures M. Ranjbar, S.B. University of Kerman/IR; S. Daneshpajo, A. Naseri, National Iranian Copper Industry Company, Sarcheshmeh/IR; M. Lotfalian, A. Behrad, M. Schaffie, E. Darehsersheski, S.B. University of Kerman/IR; Z. Manafi, M. Khoshbin, S. Ghasemi, National Iranian Copper Industry Company, Sarcheshmeh/IR</p> <p>Recovery of valuable products from biomass using a KARR column T. Lightfoot, Koch Modular Process Systems, LLC, Houston, TX/USA; D. Glatz, Koch Modular Process Systems, LLC, Paramus, NJ/USA</p>
16:10	<p>Copper solvent extraction plant commissioning M.F. Vancas, Tenova Bateman Technologies MESA, Tucson, AZ/USA</p> <p>A new approach to coil-planet centrifuges for extraction and phase separation in downstream processing P. Scherübel, A. Pfennig, Graz University of Technology/A</p>
16:40	<p>Recovery of phenol from catalytic pyrolysis bio-oil – an industrial perspective K. Babic, B. Engendahl, T. van Houtem, R. Parton, DSM, Geleen/NL</p> <p>An innovative mixing technology to improve phase separation in recovery and purification of carboxylic acids by solvent extraction S. Roman, Turbulent Technologies Ltd., Jerusalem/IL; N. Dobrin, O. Lerner, Tenova Bateman Technologies, Yokneam/IL</p>
17:10	Closing Ceremony
17:20	End of Conference

ANALYTICAL AND PREPARATIVE APPLICATIONS

- P 1.1 **Determination of PCDD/Fs and dioxin-like PCBs in the ambient air of the cement industry using the CALUX bioassay and the sensitive H1L7.5c**
S. Khedidji, University Akli Mohand Oulhaj Bouira/DZ; K. Croes, Vrije Universiteit Brussel/B; N. Yassaa, Centre Développement Energies Renouvelable, Alger/DZ; R. Ladj, Centre Recherche Scientifique Technique Analyses Physico Chimiques, Alger/DZ; M. Elskens, W. Baeyens, Vrije Universiteit Brussel/B
- P 1.2 **Transport of Pd(II) and Au(III) through redox-active bulk liquid membranes and the simultaneous formation of gold micro- and nanoparticles**
M. Sánchez-Loredo, Universidad Autónoma de San Luis Potosí/MEX; M. Grote, Universität Paderborn/D
- P 1.3 **The extraction of Co(II) with cyanex272 in a neutral micellar system**
F. Xiao, Y. Wang, Melbourne University/AUS; X. Shen, Henan University, Luo Yang/CHN; G.W. Stevens, J.M. Perera, Melbourne University/AUS
- P 1.4 **Optimizing crude oil separations – a study of turbulence and composition influence on the drop size distribution of crude oil in sea water**
S. Maaß, SOPAT GmbH, Berlin/D

BIOTECHNOLOGY, PHARMACEUTICAL, LIFE SCIENCE PRODUCTS AND ORGANIC PRODUCTS

- P 2.1 **Extraction of succinic acid by aqueous two phase system(ATPS) using ionic liquids and salts**
A.I. Pratiwi, M. Matsumoto, K. Kondo, Doshisha University, Kyotanabe/J
- P 2.2 **Separation of rosmarinic acid by reactive extraction with aminic and organophosphorus extractants**
L. Kloetzer, M. Postaru, "Gheorghe Asachi" Technical University of Iasi/RO; A.I. Galaction, "Gr.T. Popa" University of Medicine and Pharmacy of Iasi/RO; A.C. Blaga, D. Cascaval, "Gheorghe Asachi" Technical University of Iasi/RO
- P 2.3 **Reactive extraction of aminoacids – selective separation**
A.C. Blaga, D. Cascaval, L. Kloetzer, A. Carlescu, "Gheorghe Asachi" Technical University of Iasi/RO; A.I. Galaction, "Gr.T. Popa" University of Medicine and Pharmacy of Iasi/RO
- P 2.4 **Separation of zirconium and hafnium by solvent extraction from nitric liquor – part 1**
D. Carlos, C.B.S. Janúbia, Centro de Desenvolvimento da Tecnologia Nuclear, Belo Horizonte/BR
- P 2.5 **Multistage extraction as a method of dicarboxylic acids removal from glycerol bioconversion fermentation broths**
M. Regel-Rosocka, A. Krzyzkowska, D. Bednarska, M. Wisniewski, Poznan University of Technology/PL
- P 2.6 **Liquid-liquid extraction of biomolecules – process development and integration into downstream processing**
T. Wellsandt, J. Strube, Clausthal University of Technology/D

CFD APPLICATIONS

- P 3.1 **Drop formation at a nozzle hole in a plate for quiescent continuous phase**
N. Sen, K.K. Singh, S. Mukhopadhyay, K.T. Shenoy, S.K. Ghosh, Bhabha Atomic Research Center, Mumbai/IND
- P 3.2 **Numerical modeling of surfactant flooding in enhanced oil recovery**
S. Kattebifar, M. Sabeti, M.R. Ehsani, Isfahan University of Technology/IR
- P 3.3 **CFD modeling of the electrolyte flow in the copper electrowinning cell of Sarcheshmeh Copper Complex, Iran**
M. Najmi Noori, A. Mohebbi, A. Soltani, Shahid Bahonar University of Kerman/IR; B. Ghadami Arabi, Sh. Daneshpajouh, Sarcheshmeh Copper Complex/IR
- P 3.4 **Modelling approach to estimate droplet interaction parameters**
H. Jildeh, University of Kaiserslautern/D; M. Attarakih, University of Jordan, Amman/JOR; H.-J. Bart, University of Kaiserslautern/D

EXTRACTION OF NATURAL PRODUCTS FROM PLANTS

- P 4.1 **Surfactant-based extraction of microalgae products**
R. Ralena, TU Hamburg-Harburg/D; M. Kerner, SSC Ltd., Hamburg/D; I. Smirnova, TU Hamburg-Harburg/D
- P 4.2 **Green extraction of aromas from herbs and spices using alternative solvents: theoretical and experimental solubility study**
A. Filly, Université d'Avignon et Pays du Vaucluses/F
- P 4.3 **Bioguided fractionation and isolation of natural anti-ulcerogenic compounds and anti-Helicobacter pylori from Convolvulus austroaegyptiacus**
A. Al-Rifai, A. Awaad, A. Aqel, King Saud University, Riyadh/SAR
- P 4.4 **Salt influence on the partitioning of HMF in aqueous/organic systems**
S. Mohammad, C. Held, E. Altuntepe, G. Sadowski, TU Dortmund/D
- P 4.5 **Three-liquid-phase extraction and gas-assisted three-liquid-phase extraction of anthraquinones from rhubarb**
X. Yang, X. Liang, L. Yang, Q. Liu, H. Liu, Chinese Academy of Sciences, Beijing/CHN

EXTRACTION ON MINI-SCALE

- P 5.1 **Pertraction of neodymium by N, N-dibutylacetamide**
M. Toure, CEA Marcoule and University of Montpellier 2, Bagnols-sur-zeze/F; G. Borda, J. Duhamet, CEA Marcoule, Bagnols-sur-zeze/F; S. Pellet-Rostaing, CNRS, Bagnols-sur-zeze/F
- P 5.2 **A new approach to achieve countercurrent multi-stage micro-extraction**
S. Li, S. Jing, Tsinghua University, Beijing/CHN
- P 5.3 **Design, construction and start up of an experimental laboratory scale plant for testing extraction and stripping of uranium and molybdenum present in acid leached liquors**
M. Chocron, M. Arias, V. Diaz, A. Avato, Comision Nacional de Energia Atomica, Buenos Aires/RA

- P 5.4 **Multi stage extraction in micro process engineering**
B. Stanisch, T. Wellsandt, J. Strube, Clausthal University of Technology/D
- P 5.5 **Application of microreactor system in solvent extraction of metal ion with calixarene derivatives**
M. Maeki, Kyushu University, Kasuga/J; J.Y. Kim, Saga University/J; M. Miyazaki, AIST, Tosu/J; K. Ohoto, Saga University/J
- P 5.6 **Concepts for efficient extraction in micro and milli structures – Feasibility of countercurrent extraction with segmented flow-**
F. Kaske, D.W. Agar, TU Dortmund/D
- P 5.7 **Simulation based design of extraction columns for aqueous two-phase systems**
M. Schmidt, M. Wessling, RWTH Aachen/D; A. Pfennig, TU Graz/A
- P 5.8 **Reactive mass transfer in a microstructured counter-current apparatus**
S. Willersinn, H.-J. Bart, TU Kaiserslautern/D

FUNDAMENTALS

- P 6.1 **The method of equilibrium calculation in extraction systems with TBP: new results**
A. Ochkin, S. Nekhaevskiy, Mendeleev University of Chemical Technology, Moscow/RUS
- P 6.2 **How H-bonding networks in reverse micelles drive the extractive transport of Eu(III) nitrate**
R. Ellis, Argonne National Laboratory, Lemont, IL/USA
- P 6.3 **Experimental and model study on extraction of phenol by toluene**
Z. Li, K. Mumford, K. Smith, G. Stevens, The University of Melbourne/AUS
- P 6.4 **Mass transfer and hydrodynamic investigation of a hybrid pulsed extraction column**
Y. Wang, Tsinghua University, Beijing/CHN
- P 6.5 **A new electrochemical approach for solvent extraction processes**
N. Sadegi, E. Keshavarz Alamdari, Amirkabir University of Technology, Tehran/IR
- P 6.6 **Numerical modelling of centrifugal settlers based on experimental data**
R. Macher, A. Pfennig, Graz University of Technology/A
- P 6.7 **Influence of the nature of an extractant on the rate of extraction a REE at vibration on a dynamical interfacial layer**
N. Kizim, E.N. Golubina, Mendeleev University of Chemical Technology, Novomoskovsk/RUS
- P 6.8 **Solvation free energies of lead nitrate in mixed DMF-water solvents**
G. Esam, Mansoura University/ET
- P 6.9 **Gibbs solvation free energies for lead nitrate in mixed dimethylformamide-water solvents**
E. Gomaa, Mansoura University/ET
- P 6.10 **Heteropolynuclear 3d/4f metal complexes in solvent extraction**
N. Kelly, K. Schnaars, A. Heine, T. Doert, F. Taube, M. Acker, K. Gloe, K. Gloe, J.J. Weigand, TU Dresden/D
- P 6.11 **Uranyl nitrate extraction with 30% TBP in dodecane**
A. Ochkin, S. Nekhaevskiy, A. Merkushevskiy, Mendeleev University of Chemical Technology, Moscow/RUS

- P 6.12 **Solvent extraction and separation of samarium(III) using hexaacetato calix(6)arene**
Y.S. Thakare, Amravati University/IND; S.T. Gawhale, D.D. Malkhede, University of Pune/IND
- P 6.13 **Recycling metals by controlled transfer of ionic species between complex fluids**
T. Zemb, University of Montpellier 2, Bagnols-sur-ceze/F
- P 6.14 **Numerical analysis and experimental validation of droplet collision**
F. Gebauer, M.W. Hlawitschka, TU Kaiserslautern/D; J. Villwock, J. Kamp, TU Berlin/D; H.-J. Bart, TU Kaiserslautern/D; M. Kraume, TU Berlin/D
- P 6.15 **Activity coefficients of di-(2-ethyl hexyl) phosphoric acid by vapor pressure osmometry and slope analysis**
M. Gray, University of California Irvine, CA/USA; P. Zalupski, Idaho National Laboratory, Idaho Falls, ID/USA; G. Modolo, Forschungszentrum Jülich GmbH/D; M. Nilsson, University of California Irvine, CA/USA
- P 6.16 **Study of the aggregation of Cyanex 272 and Ionquest 290 by Vapor Pressure Osmometry**
M. Dehestre, Eramet Research, Trappes/F and Ecole Centrale Paris/F; M. Stambouli, Ecole Centrale Paris/F; M. Gohin, Eramet Research, Trappes/F; D. Pareau, Ecole Centrale Paris/F; Y. Le Quesne, Eramet Research, Trappes/F

FUNDAMENTALS/NOVEL REAGENTS, MATERIALS AND TECHNIQUES

- P 7.1 **The stable phases of the Cs₂CuCl₄-xBr_x mixed systems**
N. van Well, Universität Frankfurt/D; A.A. Haghighirad, Oxford University/UK; F. Ritter, W. Assmus, C. Krellner, Universität Frankfurt/D
- P 7.2 **Tuning strength of phenolic pyrazole extractants using outer-sphere H-bond buttressing**
M. Healy, University of Edinburgh/UK; V. Cocalia, Cytec Industries Inc., Stamford, CT/USA; E. Doidge, University of Edinburgh/UK; A. Fischmann, Cytec Industries Inc., Stamford, CT/USA; J. Love, C. Morrison, J. Roebuck, University of Edinburgh/UK; T. Sassi, Cytec Industries Inc., Stamford, CT/USA; P. Tasker, University of Edinburgh/UK
- P 7.3 **Influence of the nature of an extractant on the rate of extraction a REE at vibration on a dynamical interfacial layer**
N. Kizim, E.N. Golubina, Mendeleev University of Chemical Technology, Novomoskovsk/RUS
- P 7.4 **Simultaneous influence of nanoparticles and temperature on the mass transfer rate of liquid-liquid extraction**
J. Saïen, M. Zardoshti, Bu-Ali Sina University, Hamedan/IR
- P 7.5 **Selective extraction of copper(II) from ammonia solution**
K. Wieszczycka, M. Krupa, A. Wojciechowska, A. Olszanowski, Poznan University of Technology/PL
- P 7.6 **Nitrate based ionic liquid as a new solvent for extraction of aromatic from alkane**
B. Mokhtarani, CCERCI, Tehran/IR; J. Musavi, Semnan University/IR; A. Sharifi, CCERCI, Tehran/IR; M. Parvini, Semnan University/IR
- P 7.7 **Solvent extraction of precious metal ions with phenylurea type of trident molecule**
Y. Ueda, S. Morisada, H. Kawakita, K. Ohto, Saga University/J
- P 7.8 **Non-steroidal analgesics and beta-lactam antibiotics extraction with binary extracting agents**
A.L. Gulevich, V.I. Kuksa, Belarusian State University, Minsk/BY

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- P 7.9 **Sorption behaviour of Cd(II) sorption from aqueous solutions using polymeric microcapsules containing an acidic organophosphonic extractant**
V. Ide, A. Valdés, C. Basualto, J. Sapag, C. Araneda, F. Valenzuela, Universidad de Chile, Santiago/RCH
- P 7.10 **Formation and extraction ability of reverse micelle by intermolecular interaction between di(2-ethylhexyl)phosphoric acid and ethanolamines**
 K. Shiomori, K. Ejima, University of Miyazaki/J; S. Kiyoyama, Miyakonoyo NCT/J; T. Sana, Sansei Giken Co. Ltd., Yoshikawa/J
- P 7.11 **Solvent extraction of palladium from hydrochloric acid media by N,N-disubstituted thioamides**
A. Paiva, Lisbon University/P; O. Ortet, Lisbon University/P and Cape Verde University, Praia/CV
- P 7.12 **Application of polymer inclusion membranes incorporating aliquat 336 for the extractive separation of thiocyanate from its aqueous solutions**
Y. Cho, R.W. Cattrall, S.D. Kolev, The University of Melbourne, Parkville/AUS
- P 7.13 **Synthesis of alkylpiperazine and its application to a polymer inclusion membrane for selective separation of Cd(II) over Zn(II) and Ni(II)**
Y. Baba, C. Aso, T. Oshima, University of Miyazaki/J

HYDROMETALLURGY AND METALS EXTRACTIONS

- P 8.1 **Effect of aggregation on synergistic mechanism for liquid/liquid extraction**
J. Rey, S. Dourdain, S. Pellet-Rostaing, T. Zemb, CEA Marcoule, Bagnols-sur-Cèze/F
- P 8.2 **Separation of nickel from calcium and magnesium by using mixtures of cyanex 272 and D2EHPA**
M.B. Mansur, A.S. Guimaraes, P.S. Silva, Universidade Federal de Minas Gerais, Belo Horizonte/BR
- P 8.3 **A study on solvent extraction reaction of uranium sulfate with alamine 336**
M.B. Mansur, E.C. Avelar, Universidade Federal de Minas Gerais, Belo Horizonte/BR
- P 8.4 **Separation of Fe(III) from chloride solution by solvent extraction method and tri-n-butyl phosphate (TBP)**
N. Sadeghi, E. Keshavarz Alamdari, Amirkabir University of Technology, Tehran/IR
- P 8.5 **Evidence of a predictable difference between nitrate and sulphate anions in the solvent extraction of base metals by acidic extractants**
M. Hutton-Ashkeny, Curtin University and Direct Nickel Pty. Ltd., Kalgoorlie/AUS; K. Barnard, CSIRO, Perth/AUS; D. Ibana, Curtin University, Kalgoorlie/AUS
- P 8.6 **Partial inhibition of cobalt(III)-LIX®860 formation by organic acids**
M. Hutton-Ashkeny, Curtin University and Direct Nickel Pty. Ltd., Kalgoorlie/AUS; K. Barnard, CSIRO, Perth/AUS; D. Ibana, Curtin University, Kalgoorlie/AUS
- P 8.7 **Extraction of uranium from solid waste containing uranium and fluorine**
Y. Ohashi, Y. Tsunashima, Y. Tanaka, Japan Atomic Energy Agency, Okayama/J
- P 8.8 **Homogeneous liquid-liquid extraction of metals with ionic liquids**
B. Onghena, K. Binnemans, KU Leuven, Heverlee/B
- P 8.9 **Separation of metals from HEV Li-ion batteries, Part1- from nitrate leach liquor**
S. Kosaraju, C. Ekberg, S. Allard, Chalmers University of Technology, Göteborg/S

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- P 8.10 **Separation of metals from HEV Li-ion batteries, Part2- from sulphate leach liquor**
S. Kosaraju, C. Ekberg, S. Allard, Chalmers University of Technology, Göteborg/S
- P 8.11 **Separation of metals from HEV Li-ion batteries, Part3- from chloride leach liquor**
S. Kosaraju, C. Ekberg, S. Allard, Chalmers University of Technology, Göteborg/S
- P 8.12 **Separation of copper(II), zinc(II) and nickel(II) from chloride solutions with pyridinecarboxamides**
P. Budziszewska, I. Madrzak-Litwa, A. Borowiak-Resterna, Poznan University of Technology/PL
- P 8.13 **Rare earth elements recovery from used NdFeB magnets by leaching and solvent extraction**
V. Haquin, M. Miguiditchian, CEA Marcoule, Bagnols-sur-Cèze/F; R. Laucournet, E. Billy, CEA, Grenoble/F
- P 8.14 **Alkyl derivatives of 2,2'-bibenzimidazole as extractants of d-electron metal ions**
I. Madrzak-Litwa, A. Borowiak-Resterna, Poznan University of Technology/PL
- P 8.15 **Zinc extraction from sulfate-chloride solutions with mixtures of a trialkyl amine and carboxylic acids**
I.Yu. Fleitlikh, G.L. Pashkov, N.A. Grigorieva, Institute of Chemistry and Chemical Technology, Krasnoyarsk/RUS; O.A. Logutenko, Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk/RUS; A.M. Kopanyov, Khimpolitekh Ltd., Novosibirsk/RUS
- P 8.16 **Solvent extraction studies for the separation of rare earth elements using neutral and acidic organophosphorus extractants**
S. Omanovic, G. Modolo, F. Sadowski, D. Bosbach, Forschungszentrum Jülich GmbH/D
- P 8.17 **Direct extraction of molybdenum from high acid leach solution of Ni-Mo ore using an oxime extractant of HBL@101**
L. Zeng, X.L. Liao, L.S. Xiao, Y.H. Sun, Central South University, Changsha/CHN
- P 8.18 **Solvent extraction of zinc and nickel by various methods from zinc plant filter cake**
D. Moradkhani, University of Zanjan, Zanjan/IR; H. Kamran Haghighi, Amirkabir University of Technology, Tehran/IR; B. Sedaghat, Research and Engineering Company for Nonferrous Metals, Zanjan/IR
- P 8.19 **High selectivity for cobalt / magnesium separation by solvent extraction in a pilot plant**
M. Moraes Castanho de Almeida, A. Cotrim, Produçquímica Indústria e Comércio S.A., Suzano/BR
- P 8.20 **State of the art of solvent extraction and electrowinning design**
L. John, DRA Mineral Projects (Pty) Ltd., Johannesburg/ZA; G.M. Miller, Miller Metallurgical Services Pty Ltd., Corinda/AUS
- P 8.21 **Versatic 10 acid/NICKSYN™ synergistic system versus cyanex 272 for the recovery of cobalt from typical DRC/Zambian copper-Co**
S. Archer, V. Coetzee, J. Scheepers, DRA Mineral Projects (Pty) Ltd., Johannesburg/ZA; R. du Preez, M. Kotze, Mintek, Johannesburg/ZA
- P 8.22 **Stripping of calcium-loaded D2EHPA with strong and weak sulphuric acid strip liquors**
S. Archer, V. Coetzee, DRA Mineral Projects (Pty) Ltd., Johannesburg/ZA; M. Kotze, Mintek, Johannesburg/ZA; M. Cradock, MC Process, Johannesburg/ZA
- P 8.23 **Experimental design for solvent extraction of rare earth light and medium elements in hydrochloric acid media using D2EHPA in isoparaffin**
C. Sousa Junior, IFRJ, Rio de Janeiro/BR; M. Nascimento, C.B. Da Costa, Cetem, Rio de Janeiro/BR

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- P 8.24 **Recovery of zinc from HCl industrial effluents**
M.L. F. Gameiro, Remígio M. Machado, J.M.A. Rodrigues, K. Staszak, M. Regel-Rosocka, K. Wieszczycka, M. Rosinda C. Ismael, M. Teresa A. Reis, J.M.R. Carvalho, Instituto Superior Técnico, Lisbon/P
- P 8.25 **Mechanism and thermodynamics of synergistic separation of vanadium and nickel from sulfate media using D2EHPA and cyanex 272**
 S.M.M. Noori, F. Rashchi, University of Tehran/IR; E. Vahidi, University of South Florida, Tampa, FL/USA; A. Babakhani, University of Tehran/IR
- P 8.26 **Separation and purification of zirconium with amines from sulphuric acid system: a review**
 V.I. Lakshmanan, R. Sridhar, Z. Jankovic, M.A. Halim, Process Research ORTECH Inc., Mississauga/CDN
- P 8.27 **Application of the liquid surfactant membranes technique for the removal of Cr₆⁺ from a galvanising industry**
T.L.S. Miranda, V.O. Silva, A. Salum, C. Konzen, E.M.R. Araújo, F.E.B. Coelho, J.C. Balarini, Universidade Federal de Minas Gerais, Belo Horizonte/BR
- P 8.28 **Study of the solvent extraction of the lighter lanthanide metal ions by means of organophosphorus extractants**
L. Molina, C. Basualto, F. Valenzuela, J. Sapag, University of Chile, Santiago/RCH
- P 8.29 **Vanadium recovery by extraction in spent catalyst used in the manufacture of sulphuric acid**
M. Musadi, National Institute of Technology, Bandung/RI
- P 8.30 **Extraction of chromium (VI) by liquid-liquid extraction using cyphos IL 101**
Z. Gamiño-Arroyo, E.A. Franco-García, L.E. Sánchez-Cadena, I. Cano-Rodríguez, F.I. Gómez-Castro, J. Ramírez Flores, A.R. Uribe-Ramírez, Universidad de Guanajuato/MEX
- P 8.31 **Extraction of rhodium(III) and ruthenium(III) ions from chloride solutions with phosphonium ionic liquids as extractants**
M. Regel-Rosocka, M. Rzelewska, M. Wisniewski, Poznan University of Technology/PL
- P 8.32 **Preparation of the novel ionic liquids functionalized resins with tunable structure for metal ions separation**
H. Cui, J. Chen, Y. Liu, Chinese Academy of Sciences, Changchun/CHN
- P 8.33 **Liquid-liquid extraction as recycling step for metal ions – process development studies**
J. Strube, T. Wellsandt, Clausthal University of Technology/D
- P 8.34 **Innovation of solvent extraction for metal separation in mixed chloride media: case studies for different value metals**
V.I. Lakshmanan, R. Sridhar, M.A. Halim, Process Research ORTECH Inc., Mississauga/CDN
- P 8.35 **Precious metals extraction with sulfur function supported on methylacrylate-styrene copolymer**
M. Iwakuma, S. Nakajima, M. Ishikawa, Miyakonojo National College of Technology/J; Y. Baba, University of Miyazaki/J
- P 8.36 **A hydrometallurgy process for extracting cerium(IV) and thorium (IV) from bastnasite using primary amine N1923 and cyanex923**
D. Li, J. Lu, S. Liu, H. Li, Y. Bai, X. Sun, Y. Wang, Changchun Institute of Applied Chemistry/CHN

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- P 8.37 **Global experiences with a dearomatized diluent (escaidTM 110) in SX processes**
D. Bien, ExxonMobil Chemical Asia Pacific, Singapore/SGP; P.Y. Guyomar, ExxonMobil Chemical Europe, Brussels/B; J. Hu, ExxonMobil Asia Pacific Research & Development Co., Ltd., Shanghai/CHN
- P 8.38 **Extraction and separation of uranium and thorium by di-(2-ethylhexyl) 2-ethylhexyl phosphonate**
Y. Wang, C. Zhao, W. Liao, D. Li, Changchun Institute of Applied Chemistry/CHN
- P 8.39 **Partition of copper and iron ions in aqueous two phase system**
A. Jimenez, Universidad Tecnica de Oruro/BOL; Y.P. Jimenez, H.R. Galleguillos, Universidad de Antofagasta/RCH
- P 8.40 **Solvent extraction recovery of zinc and molybdenum from steelmaking dusts**
S. Virolainen, T. Sainio, Lappeenranta University of Technology/FIN
- P 8.41 **Separation of rare earth metal ions by synergistic system with 2-thenyltrifluoroacetone and TOPO**
F. Kubota, Z. Zhao, Y. Baba, N. Kamiya, M. Goto, Kyushu University, Fukuoka/J
- P 8.42 **Synthesis of novel ditopic ligands for the extraction of transition metal salts**
R. Luckay, H.-M. Smuts, J.C. Hensberg, University of Stellenbosch/ZA
- P 8.43 **Separation of indium and zinc by solvent extraction from sulfuric liquor generated from the leaching of the coating dust of the scrapped computer screens**
D. Carlos, A.C.V. Zuccheratte, Centro de Desenvolvimento da Tecnologia Nuclear, Belo Horizonte/BR

INDUSTRIAL PRACTICE

- P 9.1 **Montan wax extraction using a laboratory belt extractor: development, construction and commissioning**
M. Wollmerstädt, V. Herdegen, H.-W. Schröder, TU Bergakademie Freiberg/D; T. Naundorf, ROMONTA Unternehmensgruppe, Seefeld Mansfelder Land/D; J.-U. Repke, TU Bergakademie Freiberg/D
- P 9.2 **Computer aided design of liquid-liquid extraction columns**
M. Hlawitschka, H. Jildeh, University of Kaiserslautern/D; M.W. Attarakih, University of Jordan/JOR; H.-J. Bart, University of Kaiserslautern/D
- P 9.3 **Choose the right material of construction – wetting in extraction columns**
J. Koch, J.R. Herguijuela, Sulzer Chemtech AG, Allschwil/CH

NOVEL REAGENTS, MATERIALS AND TECHNIQUES

- P 10.1 **Trivalent actinide and lanthanide separations using tetraalkyldiglycolamides (TCnDGA) in molecular and ionic liquid diluents**
B. Mincher, R. Fox, Idaho National Laboratory, Idaho Falls, ID/USA; M. Mincher, C. Wai, University of Idaho, Moscow, ID/USA
- P 10.2 **Recovery of germanium from synthetic leach solution of zinc refinery residue using novel synergistic solvent extraction**
S. Nusen, CSIRO, Perth/AUS; T. Chairuangsi, Chiang Mai University/T; Z. Zhu, C.Y. Cheng, CSIRO, Perth/AUS

- P 10.3 **Intramolecular cooperative effect of a macrocyclic receptor bearing β -diketone fragments on the extraction of strontium into an ionic liquid**
H. Okamura, H. Naganawa, Japan Atomic Energy Agency, Tokai-mura/J; H. Imura, Kanazawa University/J; K. Shimojo, Japan Atomic Energy Agency, Tokai-mura/J
- P 10.4 **Comprehensive extraction separation study of metal ions using N,N-dioctylidiglycolamic acid DODGAA**
K. Shimojo, H. Naganawa, Japan Atomic Energy Agency, Ibaraki/J
- P 10.5 **Separation of rhodium from palladium, platinum and base metals with amide-containing tertiary amine compounds**
H. Narita, K. Morisaku, M. Tanaka, National Institute of Advanced Industrial Science and Technology, Tsukuba/J; K. Nagao, T. Fuchikami, T. Yoshida, K. Kuroda, Chemicrea Inc., Tokyo/J
- P 10.6 **Modelling the outer-sphere bonding and solvation in chloridometalate extraction**
K.J. MacQuary, University of Edinburgh/UK; R.A. Grant, R.J. Gordon, Johnson Matthey, Reading/UK; J.B. Love, C.A. Morrison, P.A. Tasker, A.M. Wilson, University of Edinburgh/UK
- P 10.7 **Synergistic extraction of divalent metal ions with p-tert-octylphenoxyacetic acid and N-donors**
T. Oshima, K. Kaneizumi, Y. Baba, University of Miyazaki/J
- P 10.8 **In-situ droplets monitoring in a lab-scale pulsed column**
A. Amokrane, CEA, Bagnols-sur-ceze/F; S. Maass, SOPAT GmbH, Berlin/D; H. Roussel, F. Lamadie, S. Charton, CEA, Bagnols-sur-ceze/F
- P 10.9 **Liquid-liquid extraction of scandium with O,O-bis(2-ethylhexyl) hydrogen thiophosphate**
K. Fujinaga, Kanazawa Institute of Technology, Nonoichi/J; Y. Nakajima, Daiichi Kigenso Kagaku Kogyo Co., LTD., Osaka/J; S. Oshima, Y. Watanabe, S. Tsurubou, Kanazawa Institute of Technology, Nonoichi/J; J. Noro, Nissan Arc. Ltd., Yokosuka/J; Y. Komatsu, Kanazawa Institute of Technology, Nonoichi/J
- P 10.10 **Ammonium and phosphonium ionic liquids as extractants for metal ions from aqueous solutions**
I. García-Díaz, F.J. Alguacil, F.A. López, Centro Nacional de Investigaciones Metalúrgicas, Madrid/E; M. Regel-Rosocka, M. Wisniewski, Poznan University of Technology/PL
- P 10.11 **Molybdenum(VI) extraction from sulphate media by quaternary 3-pirydinium ketoxime**
K. Ochromowicz, K. Wejman, Wroclaw University of Technology/PL; A. Wojciechowska, K. Wieszczycka, Poznan University of Technology/PL
- P 10.12 **Transport of zinc(II) from chloride solutions with phosphonium ILs as metal ion carriers by L-L extraction and polymer inclusion membranes**
M. Regel-Rosocka, R. Casas Jaraices, M. Baczynska, M. Wisniewski, Poznan University of Technology/PL
- P 10.13 **Solvent impregnated resin: Cyanex272 immobilised amberlite XAD-2 column for gadolinium(III) enrichment**
M. Karve, K. Pandey, University of Mumbai/IND
- P 10.14 **3-Pyridylketoxime as Zn(II) extractant from chloride solutions in pseudo-emulsion based hollow fibre strip dispersion (PEHFSDD)**
K. Wieszczycka, M. Regel-Rosocka, K. Staszak, Poznan University of Technology/PL; T.A. Reis, R.M.C. Ismael, M.L.F. Gameiro, J.M.R. Carvalho, Technical University of Lisbon/P

- P 10.15 **Encapsulation of PC-88A in microcapsules of cross-linked gel of poly(vinyl alcohol)/ alginate acid and its extraction property of Co(II)**
K. Shiomori, S. Komatsu, N.I. Inda, University of Miyazaki/J; S. Kiyoyama, Miyakonojo NCT/J; T. Takei, M. Yoshida, Kagoshima University/J
- P 10.16 **Development of a highly selective solvent extraction system for the separation of Pd(II) from a solution of a leached automotive catalyst**
J. Traeger, H.-J. Holdt, University of Potsdam/D
- P 10.17 **Thermo responsive gel including thiocrown ether unit for extraction of class b metal ions**
K. Chayama, T. Hirooka, S. Iwatsuki, Konan University, Kobe City/J
- P 10.18 **Continuous metal scavenging with a flow liquid-liquid extraction unit**
I. Vural Gursei, T. Noel, Q. Wang, V. Hessel, Eindhoven University of Technology/NL
- P 10.19 **Recovery of gallium and indium from synthetic leach solution of zinc refinery residues using novel synergistic solvent extraction**
S. Nusen, CSIRO, Perth/AUS; T. Chairuangri, Chiang Mai University/T; Z. Zhu, C.Y. Cheng, CSIRO, Perth/AUS
- P 10.20 **Selective enrichment of palladium in HNO₃ solution by micro-sized silica particles grafted with macrocyclic ligands**
G. Ye, Tsinghua University, Beijing/CHN; Y. Leng, China University of Petroleum, Beijing/CHN

NUCLEAR FUEL REPROCESSING

- P 11.1 **Molecular simulations of solvent extraction of lanthanides and actinides with diglycolamide and pyridine amide**
K. Yoshizuka, The University of Kitakyushu/J; M. Hirata, T. Kimura, Japan Atomic Energy Agency, Tokai-mura/J
- P 11.2 **Stability studies of considered grouped actinide extraction (GANEX) solvent systems**
H. Galán, A. Núñez, J. Cobos, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Madrid/E
- P 11.3 **Phenyl trifluoromethyl sulfone as diluent in a GANEX solvent**
J. Halleröd, E. Aneheim, C. Ekberg, M. Foreman, E. Löfström-Engdahl, Chalmers University of Technology, Göteborg/S
- P 11.4 **PAREX, a powerful tool for La Hague reprocessing plant operators**
J. Bisson, AREVA NC, Beaumont-Hague/F; B. Dinh, CEA, Bagnols-sur-ceze/F; C. Huel, AREVA NC, Beaumont-Hague/F
- P 11.5 **Investigation of heat of formation of reverse micelles using isothermal titration calorimetry**
A. Jackson, University of California Irvine, CA/USA; P. Zalupski, Idaho National Laboratory, Idaho Falls, ID/USA; M. Nilsson, University of California Irvine, CA/USA
- P 11.6 **Extraction chromatographic separation of Am(III) and Eu(III) by porous silica coating TPPEN-NIPA gel (1) - gel synthesis and temperature effect**
K. Takeshita, Y. Inaba, Tokyo Institute of Technology/J; T. Yaita, S. Suzuki, Japan Atomic Energy Agency, Tokai/J; A. Mori, Kobe University/J

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- P 11.7 **Development of a TODGA-based liquid-liquid extraction system for the separation of americium(III) from a simulated PUREX raffinate**
P. Kaufholz, A. Wilden, G. Modolo, F. Sadowski, S. Lange, D. Bosbach, Forschungszentrum Jülich GmbH/D; L.M. Harwood, A.W. Smith, University of Reading/UK
- P 11.8 **New actinide recovery process using N,N-dialkylamide and phenanthroline amide**
S. Shinichi, K. Tohru, Y. Tsuyoshi, Japan Atomic Energy Agency, Tokai-mura/J
- P 11.9 **Application of annular centrifugal contactors in a cold test of a new total partitioning process with simulated high level liquid waste**
W. Duan, J. Wang, J. Chen, Tsinghua University, Beijing/CHN
- P 11.10 **Transient extraction behavior analysis of plutonium in reprocessing**
G. Uchiyama, H. Abe, Japan Atomic Energy Agency, Tokai-mura/J
- P 11.11 **Application of annular centrifugal contactors in a cold test of a new total partitioning process with simulated high level liquid waste**
W. Duan, J. Wang, J. Chen, Tsinghua University, Beijing/CHN
- P 11.12 **Chromatographic separation of nuclear rare metals by highly functional xerogels**
T. Onishi, JAEA, Oharai/J; M. Rana Syed, H. Mimura, Tohoku University, Sendai/J; H. Ohbayashi, S. Koyama, JAEA, Oharai/J; Y. Niibori, Tohoku University, Sendai/J
- P 11.13 **Process uranium recovery from mixed sulfate / chloride media**
K. Soldenhoff, J. Quinn, ANSTO Minerals, Lucas Heights/AUS
- P 11.14 **Probing ligand exchange kinetics in actinide/lanthanide solvent extraction systems using NMR spectrometry**
C. Marie, CEA Marcoule, Bagnols-sur-zeze/F; K. Nash, E. Krahn, Washington State University, Pullman, WA/USA

PROCESS CHEMISTRY AND ENGINEERING

- P 12.1 **Intensification of liquid-liquid mass transfer with gas agitation for the preparation of caprolactam**
J.S. Zhang, K. Wang, X.Y. Lin, Y.C. Lu, G.S. Luo, Tsinghua University, Beijing/CHN
- P 12.2 **Selective uranium stripping from tertiary amines solution bearing molybdenum comparative study of sodium chloride and strong acid stripping processes**
M. Chocron, M. Arias, V. Diaz, A. Avato, Comision Nacional de Energia Atomica, Buenos Aires/RA
- P 12.3 **Liquid membranes to improve resource efficiency in the surface treatment industry**
E. Bringas, A.M. Urriaga, I. Ortiz, Universidad de Cantabria, Santander/E
- P 12.4 **Ant colony optimization for sequencing of solvent extraction stages and optimization of their performance**
F. Vasilyev, S. Virolainen, T. Sainio, Lappeenranta University of Technology/FIN
- P 12.5 **Preventing the introduction of air into emulsion in SX mixers**
R. Sheinman, Y. Kokotov, L. Braginsky, Turbulent Technologies Ltd., Jerusalem/IL
- P 12.6 **Study on preparation of KH_2PO_4 in microreactors by a reaction-extraction coupling process**
F. Zhao, G.S. Luo, Y.C. Lu, K. Wang, Tsinghua University, Beijing/CHN

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- P 12.7 **Impact of particle size distribution in packed bed for solid-liquid extraction for Montan wax**
Y. Wang, V. Herdegen, J.U. Repke, TU Freiberg/D
- P 12.8 **Extractive desulfurization of hexadecane using ionic liquid as a solvent**
B. Mokhtarani, H. Mansurzareh, H.R. Mortaheb, A. Sharifi, CCERCI, Tehran/IR

