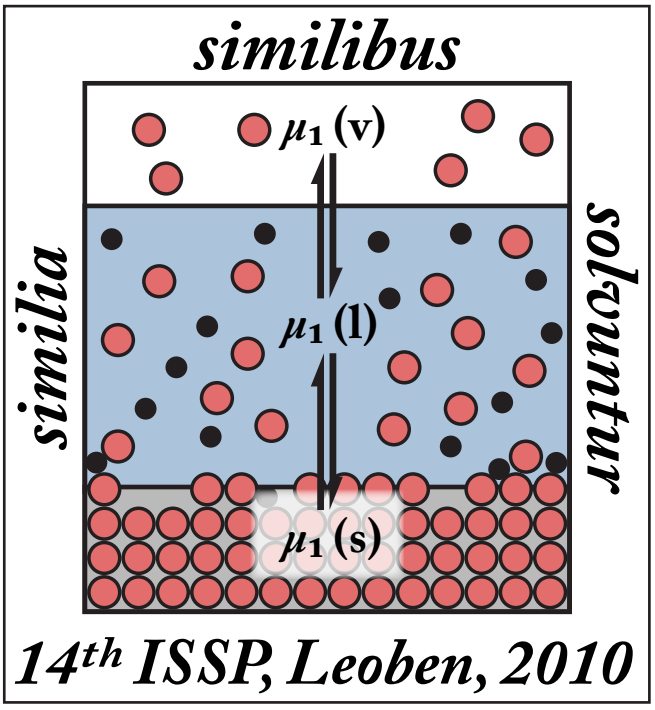
14th International Symposium on Solubility Phenomena, Workshop: From Chemical Equilibrium to Process Modelling, Inclusion of Kinetics into Thermodynamic Reasoning

MONTAN UNIVERSITÄT

Das Land Steiermark
Wissenschaft

ISSP 2010



Montanuniversität Leoben, Austria
July 25—30, 2010

Scientific Programme

SCIENTIFIC PROGRAMME

Monday, 26 July 2010

9:00 - 9:30 **Opening Ceremony** – **Aula, Montanuniversität,** Welcome Addresses:
Martha Mühlburger, Vice Rector Montanuniversität,
Heinz Gamsjäger, Co-chair 14th ISSP,
M. Filomena Camões, IUPAC Representative,
M. Clara Magalhães, Chair IUPAC SSED

The Oral Contributions to the Symposium will take place in the **Kupelwieser Hörsaal**

Chairpersons: **Heinz Gamsjäger**, Montanuniversität Leoben, Leoben, Austria,
Dewen Zeng, Central South University, Changsha, China

9:35 – 10:25 Plenary Lecture
M. Filomena Camões, University of Lisbon, Portugal
"ANALYTICAL CHEMISTRY AND SOLUBILITY PHENOMENA: INTERDISCIPLINARY METHODS, CONCEPTS, AND PROJECTS"

10:25 – 10:45 *Coffee break*

10:45 – 11:35 Plenary Lecture
Wolfgang Voigt, Technische Universität Bergakademie Freiberg, Germany
"CHEMISTRY OF SALTS IN AQUEOUS SOLUTIONS: EXPERIMENTS, THEORY, APPLICATIONS"

11:35 – 12:00 **Montserrat Filella,** University of Geneva, Switzerland
SOUND SOLUBILITY DATA URGENTLY NEEDED IN "ECOTOXICOLOGY: 'OLD' AND 'NEW' CASES"

12:00 – 12:30 **Peter Williams**, University of Western Sydney, Australia
"STABILITIES OF SAMPLEITE AND LAVENDULAN AND THE FORMATION OF SAMPLEITE IN THE NORTHPARKES COPPER–GOLD ORE SYSTEM"

12:30 – 14:00 *Lunch break*

Chairpersons: **Wolfgang Hummel,** PSI, Villigen, Switzerland,
Peter Williams, University of Western Sidney, Australia

14:15 – 14:55 Invited Lecture

Michael Grill, Leoben, Austria

"RECOVERY OF PURE MAGNESIUM OXIDE AND OTHER PRODUCTS BY HYDROMETALLURGICAL PROCESSING OF ULTRAMAFIC ROCK"

14:55 – 15:20 **Daniela Freyer**, TU Bergakademie Freiberg, Germany

"SOLUBILITIES OF BASIC MAGNESIUM SALT HYDRATES IN THE SYSTEM MgO-$MgCl_2$-H_2O WITH RESPECT TO THEIR USE AS BUILDING MATERIAL (SOREL CEMENT) IN SALT FORMATIONS"

15:20 – 15:45 **Huan Zhou**, Tianjin University of Science and Technology, China

"CONCEPT AND APPLICATION OF NON-EQUILIBRIUM STATE SALT FORMING PHASE FORMING DIAGRAM FOR SEAWATER TYPE SOLUTIONS"

15:45 – 16:00 *Coffee break*

16:00 – 16:25 **Alexander Toikka,** Saint-Petersburg State University, Russia

"THERMODYNAMIC PECULIARITIES AND PHASE DIAGRAMS OF REACTIVE LIQUID–LIQUID SYSTEMS"

16:25 – 16:50 **Zuzana Sedláková,** Institute of Chemical Process Fundamentals ASCR, Prague, Czech Republic

"LIQUID PHASE BEHAVIOUR OF MULTICOMPONENT MIXTURES SIGNIFICANT FOR BIPHASIC CATALYSIS"

16:50 – 17:15 **Tatyana Volkova,** Institute of Solution Chemistry of RAS, Ivanovo, Russia

"SOLUBILITY, SOLVATION AND PARTITIONING PROCESSES OF SOME THIADIAZOLE HETEROCYCLES – ANTI-DEMENTIA DRUGS WITH NEUROPROTECTIVE ACTION"

17:15 – 17:40 **Markus Holzweber,** Vienna University of Technology, Vienna, Austria

"ToF-SIMS ANALYSIS OF IONIC LIQIDS"

Tuesday, 27 July 2010

Chairpersons: **Ernst Gamsjäger,** Montanuniversität Leoben, Leoben, Austria,
Markus Rettenmayr, Friedrich-Schiller-Universität, Jena, Germany

9:00 – 9:50 Plenary Lecture
Klaus Hack, GTT-Technologies, Herzogenrath, Germany
"COMPUTATIONAL THERMOCHEMISTRY - A TOOL FOR DAILY USE IN INDUSTRY AND ACADEMIA"

9:50 – 10:15 **Friedrich Kokert,** voestalpine Stahl GmbH, Linz, Austria
"USE OF THERMOCHEMICAL EQUILIBRIUM TO MODEL REAL STEELMAKING PROBLEMS"

10:15 – 10:40 **Victoria Reiter,** RHI AG, Leoben, Austria
"MELT CORROSION OF REFRACTORIES IN THE NON-FERROUS INDUSTRY AND THE ELECTRIC ARC FURNACE: A THERMOCHEMICAL APPROACH"

10:40 – 10:55 *Coffee break*

10.55 – 11.35 Invited Lecture
Pertti Koukkari, VTT Technical Research Centre of Finland, Finland
APPLICATIONS OF THE CONSTRAINED GIBBS FREE ENERGY MINIMIZATION METHOD

11.35 – 12.00 **Robert Emler,** University of Leoben, Leoben, Austria
"PREDICTION OF VOLATILE RECIRCULATION IN CEMENT CLINKER BURNING SYSTEMS BY MEANS OF PROCESS SIMULATION"

12:00 – 12:25 **Andreas Ludwig,** University of Leoben, Leoben, Austria
"COUPLING OF CALPHAD METHOD WITH MULTIPHASE PROCESS SIMULATIONS"

12:25 – 14:00 *Lunch break*

Chairpersons:	**Johannes Schenk,** Montanuniversität Leoben, Leoben, Austria, **Alexander Toikka,** Saint-Petersburg State University, Russia
14:00 – 14:50	Plenary Lecture **Markus Rettenmayr,** Friedrich-Schiller-University Jena, Germany "SUPERSATURATIONS AND THEIR ROLE IN PHASE TRANSFORMATIONS"
14:50 – 15:15	**Xiaoyan Song**, Beijing University of Technology, China "EFFECTS OF INTERFACES ON THERMAL STABILITY AND PHASE STABILITY OF NANOCRYSTALLINE MATERIALS"
15:15 – 15:40	**Irina Zvereva,** Saint Petersburg State University, Russia "SOLID SOLUTIONS IN SYSTEMS WITH PEROVSKITE TYPE LAYERED OXIDES: PHASE EQUILIBRIUM, MECHANISM AND KINETICS OF FORMATION"
15:40 – 16:00	*Coffee break*
16:00 – 16:25	**Vasily Lutsyk**, Russian Ac. of Sci, Ulan-Ude, Republic Buryatia, Russia "CRISTALLIZATION IN TERNARY SYSTEMS WITH SYNTECTIC-MONOTECTIC TRANSFORMATIONS"
16:25 – 17:30	General discussion and discussion of posters: **Chr. Balarew, A. Bhattarai, E. Kajbafvala, F. Melcher, S. Michelic, O. Silyukov, S. Vollmann, J. Wiener**

Wednesday, 28 July 2010

Chairpersons:	**M. Filomena Camões,** University of Lisbon, Portugal **Glenn Hefter,** Murdoch University, Perth, Australia
9:00 – 9:40	Invited Lecture **Dewen Zeng,** Central South University, Changsha, Hunan Province, China "SOLUBILITY PHENOMENA OF CALCIUM SULPHATE AND ITS HYDRATES IN THE HYDROMETALLURGICAL PROCESS OF HEAVY METALS"
9:40 – 10:05	**Jitka Eysseltova,** Charles University, Prague, Czech Republic "SATURATED ELECTROLYTE SOLUTIONS - THERMODYNAMICS AND REALITY"
10:05 – 10:30	**Stanislav Frančišković-Bilinski,** Institute Ruđer Bošković, Zagreb, Croatia "TOXIC ELEMENTS IN STREAM SEDIMENTS AS INDICATORS OF ENVIRONMENTAL PROBLEMS"
10:30 – 10:45	*Coffee break*
10:45 – 11:10	**Dmitry Berezin,** Ivanovo University of Chemistry & Technology, Russia "ENTHALPIES OF SOLUTION OF NATURAL AND SYNTHETIC PORPHYRINS IN ORGANIC SOLVENTS"
11:10 – 12:30	**POSTER SESSION** Posters: **N. Ben-Tahar, Z. Sedláková, D. Berezin, H. Bilinski, I. Chojnacka, A. Ghanadzadeh, I. Gusev, A. M. Hassan, A. V. Kustov, K. B. Lodge, C. Magalhães I, C. Magalhães II, A. Manin, M. Oestreich, D. Ondo, S. Raeissi I, S. Raeissi II, S. Raeissi III, S. Sawamura, V. Sazonov, A.Shariati I, A.Shariati II, M. Skripkin, M. Trofimova, A. Veselinovic, T. Volkova, I. Zamyatin**
12:30 – 14:00	*Lunch break*
14:15	***CONFERENCE EXCURSION***

Thursday, 29 July 2010

Chairpersons: **Harald Harmuth,** Montanuniversität Leoben, Leoben, Austria,
Wolfgang Voigt, Technische Universität Bergakademie Freiberg, Germany

9:00 – 9:50 Plenary Lecture

Victor Truesdale, Oxford Brookes University, UK
"TIDYING UP THE ENVIRONMENT – A JOURNEY FROM EXPONENTIAL CURVES TO HYDRODYNAMICS IN ENVIRONMENTAL DISSOLUTIONS "

9:50 – 10:30 Invited Lecture

Ernst Gamsjäger, University of Leoben, Leoben, Austria

"KINETICS OF DIFFUSIVE PHASE TRANSFORMATIONS – FROM LOCAL EQUILIBRIUM TO MOBILITY DRIVEN MIGRATION OF THICK INTERFACES"

10:30 – 10:45 *Coffee break*

10:45 – 11:10 **Dmitry Sukhanov**, TU Bergakademie Freiberg, Germany:

"THE THERMODYNAMIC DATABASE THEREDA FOR MODELLING OF SOLUBILITIES IN THE OCEANIC SALT SYSTEMS – EXTENSION TO ALKALINE AND ALKALINE EARTH HYDROXIDES"

11:10 – 11:35 **Vasily Lutsyk**, Russian Ac. of Sci, Ulan-Ude, Republic Buryatia, Russia

"TERNARY SYSTEMS WITH INNER LIQUIDUS FIELDS OF LOW-TEMPERATURE ALLOTROPIES"

11:35 – 12:30 General discussion and discussion of posters:

Poster: **J. Jirsák, D. Rabadjieva I, D. Rabadjieva II, M. Slavik, P. Tokmakov, P. Williams**

12:30 – 14:00 *Lunch break*

Chairpersons: **Victor Truesdale,** Oxford Brookes University, UK,
Zhou Huan, Tianjin University of Science and Technology, P. R. China

14:00 – 14:50 Plenary Lecture

Erich Königsberger, Murdoch University, Murdoch, Australia

"SOLUBILITY OF 'IMPURITIES' IN HYDROMETALLURGICAL PROCESSES"

14:50 – 15:15 **Lan-Chi Königsberger,** Murdoch University, Murdoch, Australia

"THE BOEHMITE 'SOLUBILITY GAP"

15:15 – 15:40 **Alex De Visscher**, University of Calgary, Canada

HENRY CONSTANTS OF HYDROCARBONS IN WATER

15:40 – 15:55 *Coffee break*

15:55 – 16:20 **Glenn Hefter,** Murdoch University, Perth, Australia

"HOW WELL-BEHAVED ARE ELECTROLYTE MIXTURES AT HIGH TEMPERATURES"

16:20 – 16:35 **Cezary Guminski,** University of Warsaw, Poland

"SOLUBILITY OF RARE EARTH BROMIDES AND IODIDES IN AQUEOUS SYSTEMS"

16:35 – 16:50 **Andrey Kustov,** Institute of Solution Chemistry of RAS, Ivanovo, Russia

"SOLUBILITY OF CALCIUM OXALATE RENAL STONES IN MIXED COMPLEXON SOLUTIONS"

16:50 – 17:15 **Ronen Zangi,** University of the Basque Country, San Sebastian, Spain

"CHAOTROPES & KOSMOTROPES AND THE DRIVING FORCE FOR THE SALTING EFFECT"

17:15 – 17:40 **Wen-Hui Kuan,** Ming Chi University of Technology, Taishan, Taiwan

"MECHANISM OF As(III) REMOVAL BY MANGANESE OXIDE"

Friday, 30 July 2010

Chairpersons: **Helmut Antrekowitsch,** Montanuniversität Leoben, Leoben, Austria,
M. Clara Magalhães, University of Aveiro, Portugal

9:00 - 9:25 **Zadja Atik**, University of Sciences and Technology Houari Boumedienne, El-Alia, Algeria

"MACROSCOPIC BEHAVIOUR OF 2,2,2-TTRIFLUOROETHANOL SOLUTIONS: FROM THERMODYNAMIC PHASE EQUILIBRIUM"

9:25 –9:50 **Ramadan Ali Bawa**; 7th October University, Misurata, Libya

"ELECTRIC CONDUCTIVITY STUDY ON SOME PHENOXO IRON (III) COMPLEXES"

9:50 – 10:15 **Ajaya Bhattarai,** Tribhuvan University, Biratnagar, Nepal

"THE SOLUBILITY OF SODIUM POLYSTYRENESULFONATE IN METHANOL- WATER MIXED SOLVENT MEDIA"

10:15 – 10:30 *Coffee break*

10:30 – 10:55 **Hossein Ghanadzadeh,** University of Guilan, Iran

"PREDICTION OF LIQUID – LIQUID EQUILIBRIA TERNARY SYSTEM n-HEXANE + METHANOL+WATER USING ARTIFICIAL NEURAL NETWORK"

10:55– 11:20 **Mohammad R. Bayati,** Iran University of Science and Technology, Teheran

"ELECTROCHEMICALLY GROWN TITANIA BASED NANO/MICRO POROUS COMPOSITE FILMS FOR PHOTOCATALYTIC APPLICATIONS"

11:20 – 11:30 Concluding remarks

PLENARY and INVITED SPEAKERS

M. Filomena Camões (Pl), University of Lisbon, Portugal

ANALYTICAL CHEMISTRY AND SOLUBILITY PHENOMENA: INTERDISCIPLINARY METHODS, CONCEPTS, AND PROJECTS

Wolfgang Voigt (Pl), Technische Universität Bergakademie Freiberg, Germany

CHEMISTRY OF SALTS IN AQUEOUS SOLUTIONS: EXPERIMENTS, THEORY, APPLICATIONS

Michael Grill (Inv), Leoben, Austria

RECOVERY OF PURE MAGNESIUM OXIDE AND OTHER PRODUCTS BY HYDROMETALLURGICAL PROCESSING OF ULTRAMAFIC ROCK

Klaus Hack (Pl, workshop), GTT-Technologies, Herzogenrath, Germany

COMPUTATIONAL THERMOCHEMISTRY - A TOOL FOR DAILY USE IN INDUSTRY AND ACADEMIA

Koukkari P., Pajarre R. (Inv, workshop), VTT Technical Research Centre of Finland, Finland

APPLICATIONS OF THE CONSTRAINED GIBBS FREE ENERGY MINIMIZATION METHOD

Markus Rettenmayr (Pl, workshop), Friedrich-Schiller-University Jena, Germany

SUPERSATURATIONS AND THEIR ROLE IN PHASE TRANSFORMATIONS

Zeng D., Wang W. (Inv), Central South University, Changsha, Hunan Province, China

SOLUBILITY PHENOMENA OF CALCIUM SULPHATE AND ITS HYDRATES IN THE HYDROMETALLURGICAL PROCESS OF HEAVY METALS

Victor Truesdale (Pl, workshop), Oxford Brookes University, UK

TIDYING UP THE ENVIRONMENT – A JOURNEY FROM EXPONENTIAL CURVES TO HYDRODYNAMICS IN ENVIRONMENTAL DISSOLUTIONS

Ernst Gamsjäger (Inv, workshop), University of Leoben, Austria

KINETICS OF DIFFUSIVE PHASE TRANSFORMATIONS – FROM LOCAL EQUILIBRIUM TO MOBILITY DRIVEN MIGRATION OF THICK INTERFACES

Erich Königsberger (Pl), Murdoch University, Murdoch, Australia

SOLUBILITY OF 'IMPURITIES' IN HYDROMETALLURGICAL PROCESSES

ORAL PRESENTATIONS

O1 **M. Filella**[1], **D.A.L Vignati**[2], **P.A. Williams**[3],

[1]University of Geneva, Switzerland

[2]CNR-IRSA, Brugherio, Italy

[3]University of Western Sydney, Australia

SOUND SOLUBILITY DATA URGENTLY NEEDED IN ECOTOXICOLOGY: "OLD" AND "NEW" CASES

O2 **P. Williams**, University of Western Sydney, Australia

STABILITIES OF SAMPLEITE AND LAVENDULAN AND THE FORMATION OF SAMPLEITE IN THE NORTHPARKES COPPER–GOLD ORE SYSTEM

O3 **D. Freyer, W. Voigt**, TU Bergakademie Freiberg, Germany

SOLUBILITIES OF BASIC MAGNESIUM SALT HYDRATES IN THE SYSTEM MgO-$MgCl_2$-H_2O WITH RESPECT TO THEIR USE AS BUILDING MATERIAL (SOREL CEMENT) IN SALT FORMATIONS

O4 **H. Zhou, Y. Chen, J. Yuan, Z. Sha**, Tianjin University of Science and Technology, P. R. China

CONCEPT AND APPLICATION OF NON-EQUILIBRIUM STATE SALT FORMING PHASE FORMING DIAGRAM FOR SEAWATER TYPE SOLUTIONS

O5 **A. Toikka,** Saint-Petersburg State University, Russia

THERMODYNAMIC PECULIARITIES AND PHASE DIAGRAMS OF REACTIVE LIQUID–LIQUID SYSTEMS

O6 **M. Bendová**[1], **Z. Sedláková**[1], **Z. Wagner**[1], **K. Aim**[1], **P. Klusoň**[1], **J. Vašinová**[2], **I. Černá**[2]

[1]Institute of Chemical Process Fundamentals, Prague, Czech Republic,

[2]Institute of Chemical Technology, Prague, Czech Republic

LIQUID PHASE BEHAVIOUR OF MULTICOMPONENT MIXTURES SIGNIFICANT FOR BIPHASIC CATALYSIS

O7 **T.V. Volkova**[1], **T. Bui-Cong**[2], **A.N. Proshin**[3], **G.L. Perlovich**[1]

[1]Institute of Solution Chemistry, RAS, Ivanovo, Russia
[2]Ivanovo State University of Chemistry and Technology, Ivanovo, Russia
[3]Institute of Physiologically Active Compounds, RAS, Russia

SOLUBILITY, SOLVATION AND PARTITIONING PROCESSES OF SOME THIADIAZOLE HETEROCYCLES – ANTI-DEMENTIA DRUGS WITH NEUROPROTECTIVE ACTION

O8 **M. Holzweber**[a], **H. Hutter,**[a] **W. Linert**[b]

[a]Institute of Chemical Technologies and Analytics, Vienna University of Technology, Austria
[b]Institute of Applied Synthetic Chemistry, Vienna University of Technology, Austria

ToF-SIMS ANALYSIS OF IONIC LIQIDS

O9 **F. Kokert (workshop),** voestalpine Stahl GmbH, Linz, Austria

USE OF THERMOCHEMICAL EQUILIBRIUM TO MODEL REAL STEELMAKING PROBLEMS

O10 **V. Reiter[1], H. Harmuth[2] (workshop)**

[1]RHI AG, TCL Leoben, Austria

[2]Lehrstuhl für Gesteinshüttenkunde, Montanuniversität Leoben, Leoben, Austria

MELT CORROSION OF REFRACTORIES IN THE NON-FERROUS INDUSTRY AND THE ELECTRIC ARC FURNACE: A THERMOCHEMICAL APPROACH

O11 **R. Emler, H. Harmuth (workshop)** University of Leoben, Leoben, Austria

PREDICTION OF VOLATILE RECIRCULATION IN CEMENT CLINKER BURNING SYSTEMS BY MEANS OF PROCESS SIMULATION

O12 **A. Ludwig, M. Grasser, J. Hao, M. Wu (workshop)**

Department of Metallurgy, University of Leoben**,** Leoben, Austria

COUPLING OF CALPHAD METHOD WITH MULTIPHASE PROCESS SIMULATION

O13 **X. Song[1], W. Xu[1], N. Lu[1], Z. Zhang[1], M. Rettenmayr[2] (workshop)**

[1]Beijing University of Technology, Beijing, P. R. China

[2]Friedrich-Schiller-University Jena, Germany

EFFECTS OF INTERFACES ON THERMAL STABILITY AND PHASE STABILITY OF NANOCRYSTALLINE MATERIALS

O14 **I. Zvereva (workshop),** Saint Petersburg State University, Russia

SOLID SOLUTIONS IN SYSTEMS WITH PEROVSKITE TYPE LAYERED OXIDES: PHASE EQUILIBRIUM, MECHANISM AND KINETICS OF FORMATION

O15 **V.I. Lutsyk, A.E. Zelenaya (workshop),** RAS, Ulan-Ude, Republic Buryatia, Russia

CRISTALLIZATION IN TERNARY SYSTEMS WITH SYNTECTIC- MONOTECTIC TRANSFORMATIONS

O16 **J. Eysseltova,** Charles University, Prague, Czech Republic

SATURATED ELECTROLYTE SOLUTIONS - THERMODYNAMICS AND REALITY

O17 **S. Frančišković-Bilinski,** Institute Ruđer Bošković, Zagreb, Croatia

TOXIC ELEMENTS IN STREAM SEDIMENTS AS INDICATORS OF ENVIRONMENTAL PROBLEMS

O18 **D.B. Berezin[1], A.V. Kustov[2], N.M. Berezina[1], N.L. Smirnova[2], M.B. Berezin[2]**

[1]Ivanovo State University of Chemistry & Technology, Russia

[2]Institute of Solution Chemistry of RAS, Ivanovo, Russia

ENTHALPIES OF SOLUTION OF NATURAL AND SYNTHETIC PORPHYRINS IN ORGANIC SOLVENTS

O19 **D. Sukhanov (workshop)**, TU Bergakademie Freiberg, Germany:

THE THERMODYNAMIC DATABASE THEREDA FOR MODELLING OF SOLUBILITIES IN THE OCEANIC SALT SYSTEMS – EXTENSION TO ALKALINE AND ALKALINE EARTH HYDROXIDES

O20 **V.I. Lutsyk, Vorob'eva V.P (workshop),** RAS, Ulan-Ude, Republic Buryatia, Russia

TERNARY SYSTEMS WITH INNER LIQUIDUS FIELDS OF LOW-TEMPERATURE ALLOTROPIES

O21 **E. Königsberger**[1], **L.-C. Königsberger**[1], **D. Ilievski**[2]

[1] Murdoch University, Murdoch, Australia

[2] Alcoa World Alumina, Kwinana, Australia

THE BOEHMITE 'SOLUBILITY GAP'

O22 **A. Visscher, R. Rajan,** University of Calgary, Canada

HENRY CONSTANTS OF HYDROCARBONS IN WATER

O23 **G. Hefter,** Murdoch University, Perth, Australia

HOW WELL-BEHAVED ARE ELECTROLYTE MIXTURES AT HIGH TEMPERATURES

O24 **C. Gumiński**[1], **H. Voigt**[2], **and D. Zeng**[3]**; Partly based on achievements of the late Tomasz Mioduski**

[1]University of Warsaw, Warszawa, Poland

[2] Technische Universität Bergakademie, Freiberg, Germany

[3] Central South University, Changsha, P.R. China

SOLUBILITY OF RARE EARTH BROMIDES AND IODIDES IN AQUEOUS SYSTEMS

O25 **A.V. Kustov**[a], **A.I. Strelnikov**[b], **A.A. Shevyrin**[b], **B.D. Berezin**[a] **and V.N. Trostin**[a]

[a]Institute of Solution Chemistry of RAS, Ivanovo, Russia

[b]Ivanovo State Medical Academy, Ivanovo, Russia

SOLUBILITY OF CALCIUM OXALATE RENAL STONES IN MIXED COMPLEXON SOLUTIONS

O26 **R. Zangi,** University of the Basque Country, San Sebastian, Spain

CHAOTROPES & KOSMOTROPES AND THE DRIVING FORCE FOR THE SALTING EFFECT

O27 **W.H. Kuan**[1], **H.Y. Hiao**[1], **C.Y. Hu**[2]

[1] Ming Chi University of Technology, Taishan, Taiwan, ROC
[2] Medical University, Taipei, Taiwan, ROC, Canada

MECHANISM OF As(III) REMOVAL BY MANGANESE OXIDE

O28 **Z. Atik, L. Telli,** University of Sciences and Technology Houari Boumedienne, El-Alia, Algeria
MACROSCOPIC BEHAVIOUR OF 2,2,2-TTRIFLUOROETHANOL SOLUTIONS: FROM THERMODYNAMIC PHASE EQUILIBRIUM

O29 **A.B. Ramadam, M.E. Afra and M.S. Asma,** 7th October University, Misurata, Libya

ELECTRIC CONDUCTIVITY STUDY ON SOME PHENOXO IRON (III) COMPLEXES

O30 **A. Bhattarai,** Tribhuvan University, Biratnagar, Nepal

THE SOLUBILITY OF SODIUM POLYSTYRENESULFONATE IN METHANOL- WATER MIXED SOLVENT MEDIA

O31 **A. Ghanadzadeh[1], H. Ghanadzadeh[2], S. Ashraf[2] and B. Abbasi[2]**

[1]Department of chemistry Guilan University, Rasht, Iran

[2]Department of Chemical Engineering, Guilan University, Rasht, Iran

PREDICTION OF LIQUID – LIQUID EQUILIBRIA TERNARY SYSTEM n-HEXANE + METHANOL+WATER USING ARTIFICIAL NEURAL NETWORK

O32 **M. R. Bayati[1], R. Molaei[1], H.R. Zargar[1], E. Kajbafvala[2], S. Zanganeh[3]**

[1.]School of Metallurgy and Materials Engineering, Iran University of Science and Technology, Tehran, Iran.

[2.]Dept of Materials Science and Engineering, North Carolina State University, Raleigh, NC, USA

[3.]School of Engineering, University of Connecticut, Storrs, Connecticut, USA

ELECTROCHEMICALLY GROWN TITANIA BASED NANO/MICRO POROUS COMPOSITE FILMS FOR PHOTOCATALYTIC APPLICATIONS

POSTER PRESENTATIONS

P1 **R. Ilieva[1], E. Dyulgerova[2], C. Balarew[1], R. Titorenkova[3], O. Petrov[3] (workshop)**

[1]Institute of General and Inorganic Chemistry,Bulgarian Academy of Sciences, Sofia, Bulgaria

[2]Dental Medicine Faculty, University of Medicine, Sofia, Bulgaria

[3]Central Laboratory Mineralogy & Crystallography,Bulgarian Academy of Sciences, Sofia, Bulgaria

MECHANOCHEMICAL TRANSFORMATION OF SINTERED BIPHASE CALCIUM PHOSPHATES CERAMICS

P2 **Cancelled**

P3 **F. Melcher F. and H. Harmuth (workshop)** Chair of Ceramics, University of Leoben, Austria

MICROSTRUCTURAL AND THERMOCHEMICAL ANALYSIS OF SPINEL CASTABLES USED IN STEEL LADLES

P4 **S. Michelic, M. Hartl and C. Bernhard (workshop)** Chair of Metallurgy, University of Leoben

THERMODYNAMIC DESCRIPTION OF THE SYSTEM STEEL-SLAG- INCLUSION FOR DIFFERENT METALLURGICAL PROCESSES USING *FACTSAGE*

P5 **O.I. Silyukov (workshop)** Saint Petersburg State University, Saint Petersburg, Russia

BEHAVIOR OF SOLIDS WITH LAYERED TYPE OF STRUCTURE IN AQUEOUS SYSTEMS

P6 **S. Vollmann and H. Harmuth (workshop)** Chair of Ceramics, University of Leoben, Austria

CORROSIVE MASS TRANSFER IN STEEL LADLES

P7 **J. Wiener J., G. Wieser and J.L. Schenk (workshop)** Chair of Metallurgy, Montanuniversität Leoben, Austria

LINKING OF COMPUTER ASSISTED THERMODYNAMICS WITH AUTOMATED SEM/EDS MEASUREMENTS FOR THE CHARACTERIZATION OF NON-METALLIC INCLUSIONS IN STEEL

P8 **N. Ben Tahar, H. Mimoun,** M'hamed Bougara University, Boumerdès, Algeria

ENVIRONMENT AND WATER TREATEMENT

P9 **Z. Sedláková, M. Bendová, Z. Wagner, K. Aim,** Inst. of Chem. Proc. Fundtls, Prague, Czech Rep.

SUPERCRITICAL CO_2 SOLUBILITY IN ETHANOL, 1-BUTANOL, AND [EMIM][NTF_2]

P10 **N.L. Smirnova[1], A.V. Kustov[1], D.B. Berezin[2], A.F. Syschenko[3], M.B. Berezin[1], M.A. Krestjaninov[1]**

[1] Institute of Solution Chemistry of RAS, Ivanovo, Russia

[2] Org. Chem. Department, Ivanovo State University of Chemistry & Technology, Ivanovo, Russia

[3] Belarus State University, Minsk, Belarus'

THERMODYNAMICS OF SOLUTION OF NATURAL PORPHYRINS AND ETHYLACETATE IN POLAR SOLVENTS

P11 **I. Chojnacka[1], L. Rycerz[1], M. Gaune-Escard[2]**

[1]Faculty of Chemistry, Wroclaw University of Technology, Wroclaw, Poland

[2]Ecole Polytechnique, Marseille, France

THERMODYNAMIC PROPERTIES OF THE $TmCl_3$-MCl LIQUID MIXTURES

P12 **H. Ghannadzadeh[1] and K. Ghannadzadeh[2]**

[1]Department of Chemical Engineering, Guilan University, Rasht, Iran

[2]Department of Chemical Engineering Bacelona University, Barcelona, Spain

ESTIMATION OF VAPOR LIQUID EQUILIBRIUM OF BINARY SYSTEMS ACETONE + WATER, ETHANOL + WATER USING ARTIFICIAL NEURAL NETWORK

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FORMATION OF COMPLEX AND DOUBLE SALTS IN THE SYSTEMS

$MBr_2 – NR_4Br – H_2O$ (M = Cd, Cu, Co, Mg; R = Me, Et, Bu)

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EFFECT OF SOLVENTS ON CYCLOPALLADATION OF SCHIFF BASE DERIVED FROM CINNAMALDEHYDE AND O-AMINO PHENOL,SYNTHESIS,SPECTROSCOPIC CHARACTERIZATION AND SOLID STATE ELECTRICAL CONDUCTIVITY

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THERMODYNAMICS OF L-GISTIDINE AND L-PHENYLALANINE SOLUTIONS IN AQUEOUS ETHYLENE GLYCOL MIXTURES IN THE WATER-RICH REGION

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EVIDENCE FOR SELF-ASSOCIATION OF NONIONIC AND OTHER ORGANIC SOLUTES IN LIQUID PHASES COMPRISING 1-OCTANOL AND WATER

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RELATIONSHIP BETWEEN AVAILABLE LEAD FROM BRAÇAL MINE SOILS AND MINERALS SOLUBILITY

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A CRITICAL EVALUATION OF CADMIUM CARBONATE SOLUBILITY

P19 **Cancelled**

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SOLUBILITY, SOLVATION PROCESSES OF HYDROXY- AND CARBOXY-ACETANILIDES

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DETERMINATION OF SOLUBILITIES IN THE SYSTEM MgO - $MgCl_2$ - H_2O AT 25°C, 40°C AND 120°C

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SOLUBILITY PRODUCTS AND HEATS OF SOLUTION OF HYDROPHOBIC IONIC LIQUIDS FROM IN SITU SYNTHESIS IN ISOTHERMAL TITRATION CALORIMETER

P23 **S.S. Ashrafmansouri, S. Raeissi**

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MODELING GAS SOLUBILITY IN IONIC LIQUIDS WITH THE SAFT-γ GROUP CONTRIBUTION METHOD

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KINEMATIC VISCOSITY AND DENSITY OF SELECTED TYPES OF VEGETABLE OILS AND THEIR METHYL ESTERS:EXPERIMENTAL DATA AND CORRELATION

P25 **S. Raeissi, S.M. Mohammadzadeh, M. Barbar, M. Ranjbaran**

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LLE CALCULATIONS FOR PETROLEUM HYDROCARBON + IONIC LIQUID SYSTEMS WITH THE AID OF GENETIC ALGORITHM

P26 **S. Sawamura and I. Hiroyoshi**

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SOLUBILITY OF BIPHENYL IN WATER UNDER HIGH PRESSURE

P27 **V.P. Sazonov, N.V. Sazonov and L.N. Koroleva**

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SOLUBILITY IN TERNARY SYSTEMS WITH ACETONITRILE

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OPTIMIZATION OF WELLHEAD SEPARATOR PRESSURES

P29 **A. Shariati, S.S. Ashrafmansouri , M. Haji Osbuei, B. Hooshdaran**

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CRITICAL PROPERTIES AND ACENTRIC FACTORS OF IONIC LIQUIDS

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FORMATION OF INDIVIDUAL AND MIXED AQUA-ORGANIC CRYSTALLOSOLVATES IN THE SYSTEMS WITH COMPETING SOLVATION

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SOLUBILITY AND CRITICAL POINTS OF LIQUID-LIQUID EQUILIBRIUM IN QUATERNARY REACTING SYSTEM ACETIC ACID – ETHANOL – ETHYL ACETATE – WATER

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RELATION BETWEEN SOLUBILITY AND PARTITIONING OF PARACETAMOL FOR VARIOUS ORGANIC SOLVENTS

P33 **T.V. Volkova, I.V. Terekhova, A.V. Agafonov**, G.L. **Perlovich**

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ENHANCEMENT OF AQUEOUS SOLUBILITY OF RIBOFLAVIN, LUMICHROME AND ALLOXAZINE DUE TO INCLUSION COMPLEX FORMATION WITH NATIVE CYCLODEXTRINS

P34 **I.V. Zamyatin,** Saint-Petersburg State University, Saint-Petersburg, Russsia
CALCULATION OF PHASE EQUILIBRIA IN AQUEOUS SYSTEMS WITH ACIDOCOMPLEXATION: A <<CHEMICAL>> APPROACH

P35 J. Jirsák[1,2], J. Škvor[2], F. Moučka[2,3], W.R. Smith[3] and I. Nezbeda[1,2] (workshop)

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MOLECULAR-LEVEL SIMULATION OF SOLUBILITY AND SPECIATION IN AQUEOUS ELECTROLYTES

P36 D. Rabadjieva[1], R. Gergulova[1], R. Titorenkova[2], S. Tepavitcharova[1], E. Dyulgerova[3], O. Petrov[2], Chr. Balarew[1] (workshop)

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BIOMIMETIC SYNTHESIS AND TRANSFORMATIONS OF DICALCIUM PHOSPHATE DIHYDRATE

P37 S.Tepavitcharova, T.Todorov, D.Rabadjieva (workshop)

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THERMODYNAMIC MODELING OF CHEMICAL SPECIES IN SEA-TYPE WATERS

P38 J. Šedlbauer and M. Slavík (workshop)

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RECOMMENDED DATA ON THERMODYNAMIC PROPERTIES OF HYDRATION FOR SELECTED ORGANIC SOLUTES AND GASES

P39 P. Tokmakov and W. Voigt (workshop)

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ESTIMATION OF THERMODYNAMIC DATA OF MOLTEN CUPRIC CHLORIDE FROM PHASE DIAGRAMS

P40 P. Leverett, P.A. Williams and R. Tovar (workshop)

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THE MAGNIFICENT OSTWALD STEP RULE: THE POSITION OF LANGITE IN RELATION TO OTHER BASIC Cu(II) SULFATES

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THE INFLUENCE OF CURRENT TYPE ON PHOTOCATALYTIC PERFORMANCE OF MAO-DERIVED NANO/MICRO-STRUCTURED TITANIA FILMS

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HETEROGENEOUS EQUILIBRIA OF Hg AND Pb FROM LABORATORY TO NATURAL ENVIRONMENT

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ENTROPY OF MIXING OF LIQUID Na+Cd SYSTEM