



15th International Conference on the Properties of Water and Steam

Water, Steam, and Aqueous Solutions

—
Advances in Science and Technology for Power
Generation

Conference Program

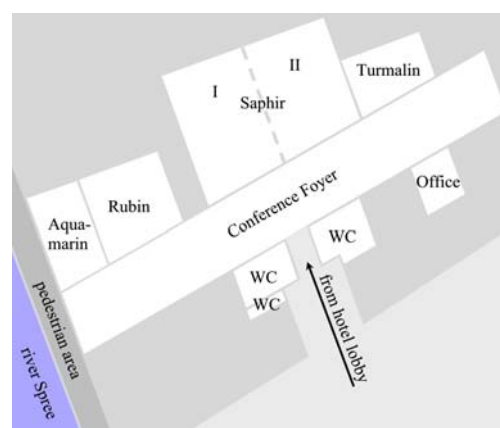
Radisson SAS Hotel
Berlin, Germany
7. – 11. September 2008

www.icpws15.de

Conference Overview

Sunday, September 7, 2008					
19:00	22:00	Welcome Reception: Room “Nikolai I” in the Dom Lounge area of the Radisson SAS Hotel, Level 7. The location will be sign-posted in the hotel lobby.			
Monday, September 8, 2008					
		Saphir I	Saphir II	Rubin	Turmalin
9:00	10:30	Opening ceremony			
11:00	13:00	Plenary Presentations			
14:30	16:10	Prop I	PCC I	Sim I	SCOR/IAPSO WG127
16:40	18:20	Prop II	PCC II	Sim II	
Tuesday, September 9, 2008					
		Saphir I	Saphir II	Rubin	Turmalin
9:00	10:40	Mon	Sea I	Crit I	IAPWS WG PCC
11:10	12:30	Ind I	Sea II	Kinetics I	
12:30	13:00	Group Photo: Meeting point 12:30 sharp in the Conference Foyer			
14:00	15:40	PCC III	Sea III	Crit II	
16:10	17:50	Ind II	PCC IV	Green I	
Wednesday, September 10, 2008					
		Saphir I	Saphir II	Rubin	Turmalin
9:00	10:40	CO2 I	PCC V	Geo I	Nucleation WS
11:10	12:50	CO2 II	Electro I	Kin II	Nucleation WS
13:50	15:30	Prop III	Electro II	Kin & Geo	Nucleation WS
16:00	17:00	Poster Session			Nucleation WS
18:00	23:00	IAPWS Banquet: Meeting point 18:00 sharp in the Conference Foyer			
Thursday, September 11, 2008					
		Saphir I	Saphir II	Rubin	Turmalin
9:00	10:15	IAPWS General Meeting Helmholtz Award Presentation			
10:45	12:25	Electro III		Green II	Geo II
12:25	12:55	Presentation of Student Awards Closing Ceremony			
14:00	18:00	Excursion: Meeting point 14:00 sharp in the Conference Foyer			

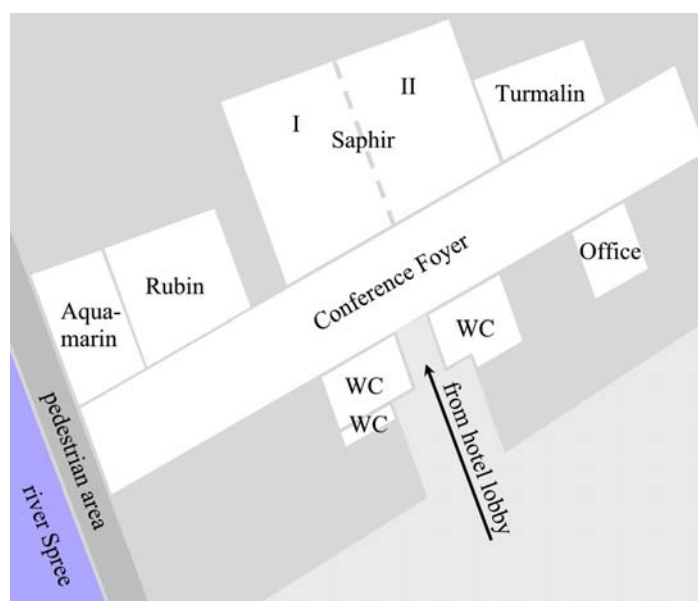
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Prop (Symp. 02):	Thermodynamik and Transport Properties of Aqueous Systems
Sim (Symp. 03):	Molecular Simulation and Spectroscopy in Aqueous Systems
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PCC (Symp. 08):	Power Cycle Chemistry
Geo (Symp. 09):	Hydrothermal Geochemistry
Green (Symp. 10):	Green Energy
CO2 (Symp. 11):	CO ₂ in Power Generation – Challenges in Capture, Transportation and Storage
Sea (Symp. 12):	Thermophysical Properties of Sea Water – Importance for Global Climatic and Oceanographic Modeling and Desalination
Nucl, Nucleation WS:	Workshop on homogeneous vapor-liquid nucleation in water



Conference Schedule

Schedule for Monday, September 8, 2008, morning sessions:

	Saphir I	Saphir II	Rubin	Turmalin
	Opening ceremony Chair: J. Cooper, IAPWS President			
9:00	9:45	Welcome Addresses Dr. B. Rukes, Chair of the 15th ICPWS Organizing Committee M. Machnig, State Secretary of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety		
9:45	10:30	Gibbs Award Lecture W. Wagner "From the Beginning to this Day - My First Naive Ideas and the Research Results Achieved"		
10:30	11:00	Coffee Conference Foyer		
	Plenary Presentations Chair: Prof. R. Span, Ruhr-University Bochum, Germany			
11:00	11:40	Seawater panel "Pathways for adopting new seawater definitions" Keith Alverson, IOC/UNESCO Trevor J. McDougall, CSIRO		
11:40	12:20	Key Note Lecture 1 John M. Prausnitz "Selected Examples of Aqueous Systems in Modern Chemical Technology"		
12:20	13:00	Key Note Lecture 2 Michael Süß "Future Power Plant Design and its Relevance for Working Fluid Properties"		
13:00	14:30	Gibbs Award Luncheon Room Nikolai I in the Dom Lounge area, Level 7 (use Dom Lounge elevator from the hotel lobby)		



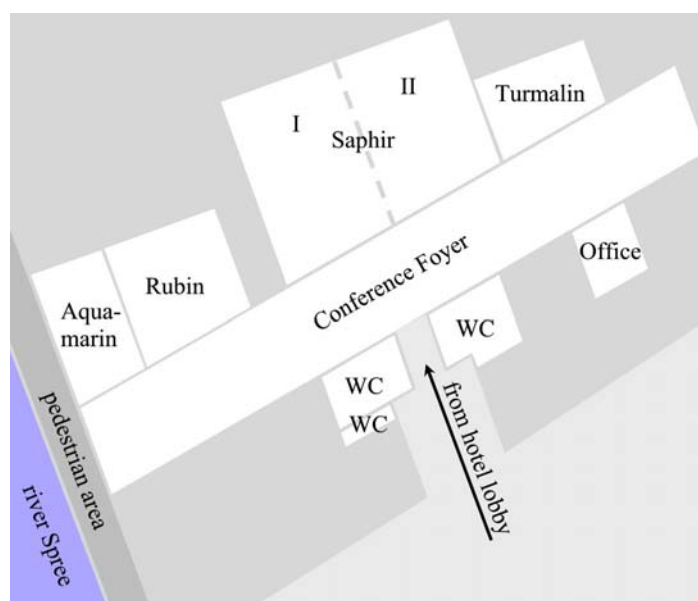
Schedule for Monday, September 8, 2008, afternoon sessions I:

	Saphir I	Saphir II	Rubin	Turmalin
	Prop I Chair: Dr. A. Harvey, NIST, USA	PCC I Chair: J. Bellows, Siemens Power Generation Inc., USA	Sim I Chair: Dr. K. Yasuoka, Keio University, Japan	SCOR/IAPSO WG127
14:30 14:50	Prop 1 (invited) A. Anderko "Prediction of Thermal Conductivity of Electrolyte Solutions in Wide Ranges of Concentration and Temperature"	PCC 1 R. Svoboda "Steam Turbine Chemistry in Light Water Reactor Plants"	Sim 1 (invited) A. K. Soper "Partial de-mixing as an explanation of excess entropy in alcohol water mixtures"	WG meeting
14:50 15:10		PCC 2 M. Stastny "Condensation of Water Steam with and without NaCl Impurity in a Nozzle"		
15:10 15:30	Prop 2 S. Lvov "A new model for distribution of solutes between coexisting water and steam with incorporation to saline fluids: implementation of a unified equation of state"	PCC 3 V. Hanzal "Measurement of Heterogeneous Condensation Seeds in the Steam Phase Transition Zone"	Sim 2 K. Minatoya "Gibbs Ensemble Monte Carlo Simulations on the Binary Phase Equilibrium of Methane Hydrate / Methane Vapor"	
15:30 15:50	Prop 3 J. Sedlbauer "Group Contribution Method for Aqueous Nitro-, Chloro-, and Phenolate-Substituted Aromatics at Elevated Temperatures"	PCC 4 D. S. Smetanin "Prediction of water chemistry state by means of artificial neural network"	Sim 3 R. Sakamaki "Molecular Dynamics Simulation of Adsorption on Water/Methane Interface"	
15:50 16:10	Prop 4 V.M.Valyashko "Heterogenization of Supercritical Fluids in Ternary Water-Salt Systems"		Sim 4 I. Svishchev "Salt Nucleation in Supercritical Water: Molecular Simulations"	
16:10 16:40	Coffee Conference Foyer			

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Nucl. Nucleation WS: Workshop on homogeneous vapor-liquid nucleation in water	

Schedule for Monday, September 8, 2008, afternoon sessions II:

	Saphir I	Saphir II	Rubin	Turmalin
	Prop II Chair: Prof. G. Maurer, University of Kaiserslautern, Germany	PCC II Chair: M. Rziha, Siemens AG Energy Sector, Germany	Sim II Chair: Prof. I. M. Svishchev, Trent University, Canada	
16:40 17:00	Prop 5 D. G. Friend "Proposed IAPWS Formulation for the Viscosity of Water"	PCC 5 F. Gabrielli "Cycle Chemistry Overview for Supercritical and Ultra- Supercritical Plants"	Sim 5 J. Vrabec "Thermophysical Properties of Humid Air by Molecular Simulation - Dew Point Calculations in a New Ensemble"	
17:00 17:20	Prop 6 T. Riethmann "New Equations for the Melting Pressure and Sublimation Pressure of H ₂ O Ice Ih"	PCC 6 G. J. Bignold "The control of corrosive conditions caused by concentration of low- volatility solutes in boilers and steam generators"	Sim 6 J. Holzmann "Solubility of gases in aqueous salt solutions: A MD simulation study on the influence of different salts"	
17:20 17:40	Prop 7 R. Feistel (V. Tchijov) "Thermodynamic properties of high-pressure ices: A review"	PCC 7 F. Gabrielli "A new IAPWS guidance document on the determination of the Carry Over from drum boilers"	Sim 7 N. Matubayasi "Diffusion Dynamics of Supercritical Water Studied by NMR and MD"	
17:40 18:00	Prop 8 H. Wolf "Density of pure liquid water at normal pressure measured at the ppm-level"	PCC 8 A. Howell "Chemistry of the Transport of Water Droplets in Steam"	Sim 8 A. A. Chialvo "Water Liquid-Vapor Isotope Fractionation: A Direct Comparison Between Molecular Simulation and Experiment"	
18:00 18:20			Sim 9 S. Okazaki "A Mixed Quantum-Classical Molecular Dynamics Approach to Proton Transfer Reaction of a Solute Molecule in Solution"	



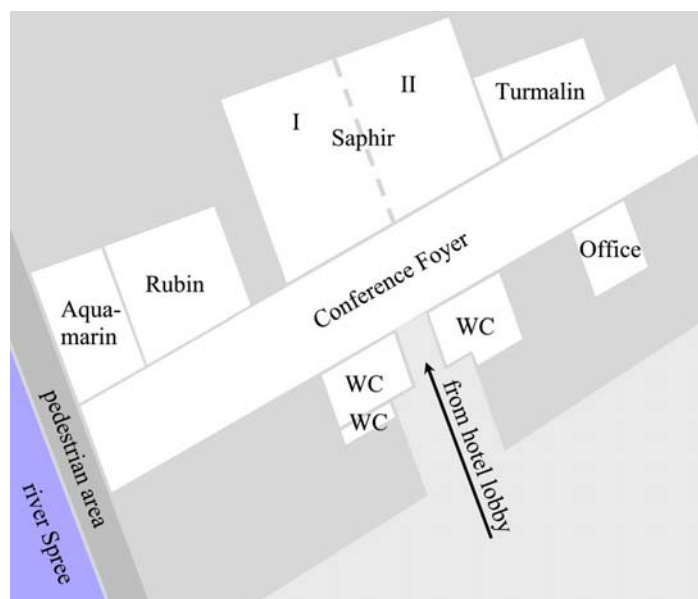
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	Mon Chair: Prof. M. Ueno, Doshisha University, Japan	Sea I Chair: Dr. R. Feistel, Baltic Sea Research Institute, Germany	Crit I Chair: Prof. J. V. Sengers, University of Maryland, USA	IAPWS PCC WG meeting
9:00 9:40	Mon 1 (invited) M. Nakahara "High-Temperature Multinuclear-Magnetic- Resonance Probe for the Analysis of Structure, Dynamics, and Chemical Reactions in Supercritical Water"	Sea 1 (invited) T. J. McDougall "On the Need for the Accurate Representation of Seawater Thermodynamics in Ocean Climate Models"	Crit 1 (invited) H. E. Stanley "New Results on Water in Bulk, Nanoconfined, and Biological Environments"	WG meeting
9:40 10:00	Mon 2 R. Jasionowski "The effect of aluminium content on the cavitation erosion resistance of Fe- Al(B2) alloys"	Sea 2 R. Tailleux "Is turbulent mixing efficiency in seawater controlled by the nonlinearity of the equation of state?"	Crit 2 I. Brovchenko "Phase transitions and percolation transitions in bulk and confined water"	
10:00 10:20	Mon 3 Y. Kimura "Resonance and non- Resonance Raman Spectroscopic Measurements of Solvatochromic Probe Molecules in Supercritical Water"	Sea 3 D. G. Wright "The Composition of Standard Seawater and the Definition of the Reference- Composition Salinity Scale"	Crit 3 A. Oleinikova "Volumetric properties of water near surfaces"	
10:20 10:40	Mon 4 K. Yoshida "Microscopic and Mesoscopic Structures of Alcohol-water Mixtures in a Supercritical State"	Sea 4 S. Seitz "Improved consistency of Practical Salinity results by traceability to the SI"	Crit 4 M. Sedlář "Analysis of Cavitation Phenomena in Water and its Application to Prediction of Cavitation Erosion in Hydraulic Machinery"	
10:40 11:10	Coffee Conference Foyer			

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Tuesday, September 9, 2008, morning sessions II:

	Saphir I	Saphir II	Rubin	Turmalin
	Ind I Chair: W. Parry, General Electric, USA	Sea II Chair: T. Mc Dougall, CSIRO Marine and Atmospheric Research, Australia	Kin I Chair: Dr. D. A. Palmer, Consultant, USA	
11:10 11:30	Ind 1 (invited) G. Löbel “Water and Steam Properties for Power Plant Design”	Sea 5 R. Feistel “Thermodynamic Potentials of Water, Vapor, Ice, and Seawater: A New Standard for Oceanography”	Kin 1 (invited) A. A. Chialvo “Ion Pair Association in Extreme Water Environments: Molecular- based and Electric Conductance Approaches”	
11:30 11:50		Sea 6 D. R. Jackett “New Algorithms for IAPWS Pure Water, Ice and Seawater Free Energy Potentials”		
11:50 12:10	Ind 2 A. Butterlin “Usage of Water & Steam Properties in Computational Intensive Dynamic Simulations”	Sea 7 G.M. Marion “Salinity/Temperature Ranges for Application of Seawater Thermodynamic Models”	Kin 2 L. Qiu “Solubility of Zirconium Dioxide at Elevated Temperatures”	
12:10 12:30	Ind 3 M. Kunick “Fast Calculation of Thermodynamic Properties of Water and Steam in Process Modelling using Spline Interpolation”	Sea 8 J. T. Safarov “Thermodynamic Properties of Seawater”	Kin 10 P. Bénézeth “Effect of Amines on the Surface Charge Properties of Iron Oxides”	
12:30 13:00	Group Photo Meeting point 12:30 sharp in the Conference Foyer			
13:00 14:00	Lunch Conference Foyer & Room Aquamarin			



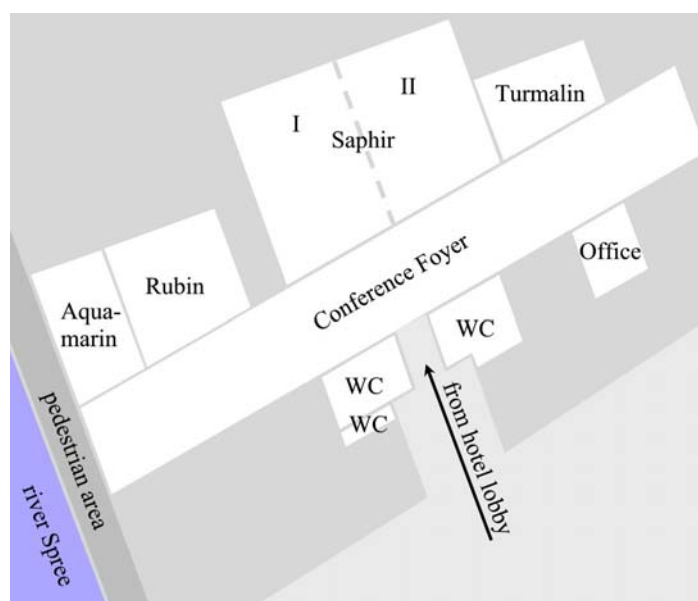
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	PCC III Chair: M. Rziha, Siemens AG Energy Sector, Germany	Sea III Chair: Dr. R. Tailleux, University of Reading, United Kingdom	Crit II Chair: Prof. M. A. Anisimov, University of Maryland, USA	
14:00 14:20	PCC 9 P. Srisukvatananan “Corrosion Product Sampling in Power Plants under Water/Steam Cycle Conditions”	Sea 9 F. J. Millero “The Density of Natural Seawater as a Function of Salinity (0.2 to 50) and Temperature (0 to 90°C)”	Crit 5 J. V. Sengers “Viscosity of H ₂ O in the critical region”	
14:20 14:40	PCC 10 W. Sahle “Sample preparation technique for High resolution electron microscopy on CRUD samples as collected on filter paper from light water nuclear power plants”	Sea 10 C. A. Chen “High conductivity but low total dissolved solids of an hydrothermal system offshore NE Taiwan”	Crit 6 H. St. Pierre “Asymmetric Interface of a Near-Critical Aqueous Droplet”	
14:40 15:00	PCC 11 R. L. Bryant “Using Particle Counters for Pretreatment Optimization, Iron Transport Monitoring, Condenser Leak Detection, and Carryover Monitoring – A Synopsis of Experiences”	Sea 11 J. T. Safarov “(p, ρ, T) Properties of the Caspian Seawater”	Crit 7 D. Fuentevilla “An equation of state and the order parameter for the liquid-liquid critical point in supercooled water”	
15:00 15:20	PCC 12 S. Uchida “High Temperature Water Chemistry Sensors Related to Nuclear Power Plants”	Sea 13 H. Glade “Thermophysical Properties of Seawater for Desalination Processes”	Crit 8 J. Kalova “Scaled equation of state for supercooled water – comparison with experimental data and IAPWS 95”	
15:20 15:40	PCC 13 D. S. Smetanin “Priority directions in development of cycle chemistry monitoring systems”		Crit 9 J. Kalova “Equations for the Thermodynamic Properties at Saturation Line in Supercooled Water Region”	
15:40 16:10	Coffee Conference Foyer			

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	Ind II Chair: Prof. H.-J. Kretzschmar, Zittau/Goerlitz University of Applied Sciences, Germany	PCC IV Chair: Geoffrey J Bignold, GJB Chemistry fo Power Ltd., United Kingdom	Green I Chair: Dr. Ch. Sattler, German Aerospace Center, Germany	
16:10 16:30	Ind 4 F. Dauber "Development of a New Equation for Region 5 of the Industrial Formulation IAPWS-IF97"	PCC 14 A. Drexler "Influence of UV-light on dissolution behaviour of metal oxides in organic acids at temperatures below 100°C"	Green 1 (invited) M. Roeb "Water - a Raw Material for Sustainable Generation of Hydrogen as a Fuel"	
16:30 16:50	Ind 6 R. Mares "Thermophysical Properties Converted from Data and Equations based on Old Temperature Scales"	PCC 15 V. Ender "Sorption of Natural Organic Matter by Adsorber and Ion Exchange Resins – Investigations with Starch and Phenylalanine as Model Substances"		
16:50 17:10	Ind 7 V.F. Ochkov "Steam Tables and Diagrams on Mathcad Calculation Server for Personal Computers, Pocked Computers and Smart Phones"	PCC 16 P. Gomes "Film forming amine technology for steam generator treatment: properties, standardisation issues and field experiences"	Green 2 J. Birnbaum "A Concept for Future Parabolic Trough Based Solar Thermal Power Plants"	
17:10 17:30		IAPWS PCC WG meeting	Green 3 K. Morita "Electronic Effects in Catalytic Function of Water Dissociation and Hydrogen Gas Creation of Hydrogen- Implanted Oxide Ceramics Exposed to Water Vapour"	
17:30 17:50		IAPWS PCC WG meeting	Green 4 N. Kometani "Photocatalytic Enhancement of Hydrogen Evolution from Ethanol by TiO ₂ in High- temperature High-pressure Water"	



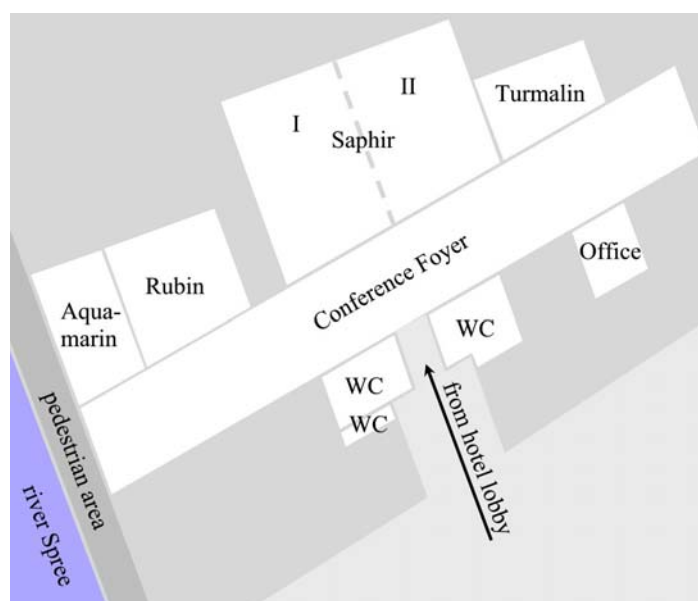
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	CO2 I Chair: Prof. R. Span, Ruhr- University Bochum, Germany	PCC V Chair: K. Dacic, DONG Energy, Denmark	Geo I Chair: Dr. P. Tremaine, University of Guelph, Canada	Nucleation WS Chair: Dr. J. Hruby, Institute of Thermomechanics AS CR, Czech Republic
9:00 9:20	CO2 1 (invited) O. Bolland "Carbon dioxide capture and storage – what is the problem?"	PCC 18 T.I. Petrova "Effect of Water Chemistry on Deposition Rate and Iron Corrosion Products in Boiler Tubes"	Geo 7 (invited) J. Schott "The link between mineral dissolution/precipitation kinetics and aqueous solution chemistry"	Nucl. 1 (invited) J. Wölk "Homogeneous vapor-liquid Nucleation of Water: State of the Art"
9:20 9:40		PCC 19 C. Mansour "Effect of temperature and reducing conditions on the sorption of sulfur species on magnetite"		
9:40 10:00	CO2 2 A. Gottschalk "Pre-Combustion CO ₂ Capture Technologies Treating Gaseous Fuels - EU-FP6-Project CACHET"	PCC 20 T.I. Petrova "Behavior of aluminium corrosion products in water- steam cycle of power plant"	Geo. 5 A. Stefansson "Iron(III) complexation in hydrothermal solutions – an experimental and theoretical study"	Nucl. 2 S. Mall-Gleißle "Generation of Supersaturated Gas-Vapour Mixtures and Nucleation of Water"
10:00 10:20	CO2 3 V. Darde "Chilled ammonia process for CO ₂ capture"	PCC 21 A. Pfennig "Effect of CO ₂ on the stability of steels with 1% and 13% Cr in saline water"	Geo. 6 M. Machesky "Oxide/Solution Interfacial Structure, Dynamics and Thermodynamics to Hydrothermal Conditions"	Nucl. 3 J. Hruby "Thermophysical Properties of Water in Application to Vapor-Liquid Nucleation" Discussion
10:20 10:40	CO2 4 L. Faramarzi "Extended UNIQUAC Model for Prediction of Vapor- liquid Equilibria of Carbon Dioxide in Alkanolamine Solutions"	PCC 22 R. Svoboda "Behaviour of copper in generator stator cooling- water systems"		
10:40 11:10	Coffee Conference Foyer			

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11:10 11:30	CO2 5 B. M. Sass “Considerations for Conditioning Oxy- Combustion Flue Gas Prior to Sequestration”	Electro 1 (invited) S. Uchida “Corrosion of Structural Materials and Electrochemistry in High Temperature Water of Nuclear Power Systems”	Kin 3 D. A. Palmer “Adsorption of ions on zirconium oxide surfaces from aqueous solutions at high temperatures”	Nucl 4 J. Malila “Properties of Supercooled Water Clusters from Nucleation Rate Data with the Effect of Non-ideal Vapour Phase”
11:30 11:50	CO2 6 D. Kühnemuth “Evaluation of Concepts for secondary SO _x and NO _x removal from the Oxy-fuel Process”		Kin 4 D. A. Palmer “Solubility of Zinc Silicate and Zinc Ferrite in Aqueous Solutions to High Temperatures”	Nucl 5 O. Hellmuth “Ice Nucleation in Earth’s Atmosphere: Phenomenology, Genesis and Parameterisation in Atmospheric Models”
11:50 12:10	CO2 7 L. Stroink “CCS as a part of the German Mitigation Strategy – The willpower to act”	Electro 2 D. Zinemanas “Flow Accelerated Corrosion: Flow field and mass transport in bifurcations”	Kin 5 R. Thiéry “Explosive Properties of Water in Volcanic and Hydrothermal Systems”	Nucl 6 T. Némec “The possibility of direct gas- to-solid nucleation mechanism in water vapor”
12:10 12:30	CO2 8 S. Hurter “Impact of Mutual Solubility of H ₂ O and CO ₂ on Injection Operations for Geological Storage of CO ₂ ”	Electro 3 H. Okada “Evaluation Method on Flow Accelerated Corrosion of Components in Cooling Systems of Nuclear Power Plants by Coupling Analysis of Corrosion and Flow Dynamics”	Kin 6 A. Dias “Conventional and Microwave-assisted Hydrothermal Fabrication of Nanostructured Electroceramics”	Discussion
12:30 12:50		Electro 4 D. H. Lister “A Fundamental Study of Flow-Accelerated Corrosion in Feedwater Systems”		Discussion
12:50 13:50	Lunch Conference Foyer & Room Aquamarin			



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13:50 14:10	Prop 10 M. Wendland “The Dew Point of Compressed Humid Gases: A Critical Evaluation of Experimental Data and Models”	Electro 5 (invited) A. Molander “Electrochemical Measurements in Nuclear Power Environments”	Kin 7 E. Bulemela “Deuterium Isotope Effects on the Ionization Constants of β -Naphthol in High- Temperature Water by UV- Visible Spectroscopy”	Nucl 7 A. White “Moment-Based Integration of the Combined Nucleation and Droplet Growth Equations for Wet-Steam”
14:10 14:30	Prop 11 A. H. Harvey “Application of Molecular Modeling to Vapor-Liquid Equilibrium of Water with Synthesis Gas”		Kin 9 Y. Yasaka “Kinetics and Equilibrium of the Reversible Formic Acid Decomposition in Hot Water”	Nucl 8 B. E. Wyslouzil “Modeling of H ₂ O and D ₂ O Condensation in Supersonic Nozzles”
14:30 14:50	Prop 12 R. Hellmann “Calculation of Viscosity and Thermal Conductivity of Dilute Water Vapour Using the Kinetic Theory of Gases”	Electro 6 S. Lvov “Electrochemical Corrosion Measurements in High Temperature Boiler Water”	Geo 1 S. Jahn “Speciation in aqueous fluids at high pressure and high temperature by ab initio molecular dynamics”	Nucl 9 J. W. P. Schmelzer “Theoretical Description of Nucleation in Condensation and Boiling: Comparison of Different Theoretical Approaches”
14:50 15:10	Prop 13 M. Ueno “Temperature Effect on the Rotational Motion of D ₂ O in Formamide and N, N- Dimethylformamide-D ₂ O Mixtures”	Electro 7 S. Lvov “Zeta Potential of Deposit Components at Elevated Temperatures”	Geo 2 E. F. Bazarkina “Cadmium and zinc behaviour in chloride-rich hydrothermal fluids: Insights from solubility and partitioning experiments and in situ XAFS spectroscopy”	Discussion
15:10 15:30	Prop 14 A. Lassin “Using the EoS of Water (IAPWS95) in Capillary Geochemical Systems”	Electro 8 T. Satoh “Corrosion of stainless steel in high temperature water containing H ₂ O ₂ ”	Geo 4 J. Ehlerova “Ionization and Calorimetric Properties of Aqueous Nitrophenols”	Discussion
15:30 16:00	Coffee Conference Foyer			

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Sea (Symp. 12):	Thermophysical Properties of Sea Water – Importance for Global Climatic and Oceanographic Modeling and Desalination
Nucl, Nucleation WS: Workshop on homogeneous vapor-liquid nucleation in water	

Wednesday, September 10, 2008, afternoon sessions II:

	Conference Foyer	Turmalin
	Poster Session	Nucleation WS Chair: Dr. J. Hruby, Institute of Thermomechanics AS CR, Czech Republic
16:00 16:20	Poster 1 H.-J. Kretzschmar "Property Libraries for Water and Steam and Related Mixtures for Calculating Heat Cycles, Turbines, Heat Pumps, and Refrigeration Processes" Poster 2 S. Herrmann "Properties of Humid Air for Power-Cycle Calculations"	Nucl 10 A. Kumar "Homogeneous Nucleation Temperatures in Aqueous Mixed Salt Solutions up to Elevated Pressures"
16:20 16:40	Poster 3 M. Wendland "Measurements of the Water Activity with FTIR Spectroscopy" Poster 4 M. A. Zaripova "Density, Viscosity of Water Hydrazine hydrate solutions in dependence of Temperatures and Pressures" Poster 5 M. Slavik "Enthalpy of Ionization for Isomeric Chlorophenols in Water"	Nucl 11 V.G. Baidakov "Experimental Investigations of Superheated and Supercooled Water (A review of papers of the school of the academician V.P. Skripov)"
16:40 17:00	Poster 6 M. M. Safarov "Thermodynamics Properties binary and ternary of systems (Polyethylenglicoly, Water and Hydrazine) independence Temperatures and Pressures" Poster 7 Y. Andoh "Molecular dynamics study on molecular origin of ¹ H-NMR spectrum of cholesterol in lipid bilayer" Poster 8 K. Fujimoto "Free energy of transfer of alkane molecules from water to hydrophobic core of the spherical sodium dodecyl sulfate micelle by molecular dynamics calculation" Poster 9 T. Koishi "Molecular Dynamics Simulation of Water Droplet on a Rough Surface" Poster 10 H. Matsubara "Effect of Sulfuric Acid Molecules on Nucleation of Water Vapor: A Molecular Dynamics Study" Poster 11 P. Junglas "Implementing the IAPWS95 standard in Matlab®" Poster 13 X. Wang "Hydrothermal synthesis of nano size Cd(S _x Se _{1-x}) pigment" Poster 14 J. R. Heberle "Coal Energy Conversion with Carbon Sequestration via Combustion in Supercritical Saline Aquifer Water" Poster 15 B.M. Larin "Mathematical Model of Ionic Equilibrium for Chemical Monitoring of the Operating Medium Quality of Direct-flow boilers" Poster 16 J. Gernert "Equation of State for Combustion Gases and Combustion Gas Like Mixtures" Poster 17 D. Raffa "Deuterium Isotope Effects on the Ionization Constants of Acetic Acid in High-Temperature Water by AC Conductance Measurements"	Discussion
18:00 23:00	IAPWS Banquet Meeting point 18:00 sharp in the Conference Foyer	

Thursday, September 11, 2008:

	Saphir I & II	Rubin	Turmalin
	Chair: J. Cooper, IAPWS President		
9:00 9:45	IAPWS General Meeting		
9:45 10:15	Helmholtz Award Presentation / Lecture N. Yoshii "Molecular dynamics study of sub- and supercritical fluids: Analyses of high temperature clusters"		
10:15 10:45	Coffee Conference Foyer		
	Electro III Chair: Prof. S. Lvov, Pennsylvania State University, USA	Green II Chair: N. Okita, Toshiba Corporation, Japan	Geo II Chair: Dr. M. Machesky, Oak Ridge National Laboratory, USA
10:45 11:25	Electro 9 (invited) T.R. Allen "Mechanisms of Oxidation in Supercritical Water"	Green 5 (invited) N. Yamasaki "Establishment of an Ecologically Sustainable Society by means of Fusion in GAIA Thought and Traditional Japanese Culture"	Geo 9 E. L. Shock "Hydrothermal Geochemistry and the Deep Biosphere"
11:25 11:45	Electro 10 M G Angell "The effect of steam pressure on the oxidation behaviour of annealed 9% Cr 1% Mo boiler tubing materials"	Green 6 I. Jiříček "Advanced Low-Impact Solution for Deicing"	Geo 8 S. Arnórsson "Chemical thermodynamics of two-phase geothermal systems"
11:45 12:05	Electro 12 D. Huenert "Corrosion of steels in H ₂ O-CO ₂ atmospheres at temperatures between 500°C and 700°C"	Prop 15 T. Hoshina "Flow type densimeter with the vibrating tube for measurements at high temperatures and pressures"	Geo10 P. Tremaine "Ionization Constants, Equation of State Parameters, and Thermal Decomposition Kinetics of Nucleic Acid Bases Under Hydrothermal Conditions"
12:05 12:25		Prop 16 H. Miyamoto "Precise measurements of the <i>ppT_x</i> and critical properties for the ammonia-water systems in the temperature range from (437 to 503) K at pressures up to 200 MPa"	
12:25 12:55	Presentation of Student Awards, Closing Ceremony		
12:55 13:55	Lunch Conference Foyer & Room Aquamarin		
14:00 18:00	<u>Excursion</u> Meeting point 14:00 sharp in the Conference Foyer		

Ind (Symp. 01):	Calculation of Water and Steam Properties for Industrial Use
Prop (Symp. 02):	Thermodynamik and Transport Properties of Aqueous Systems
Sim (Symp. 03):	Molecular Simulation and Spectroscopy in Aqueous Systems
Crit (Symp. 04):	Nonequilibrium, Metastable and Critical States
Kin (Symp. 05):	Thermodynamics and Kinetics in Hydrothermal Systems
Electro (Symp. 06):	Electrochemistry and Corrosion in High Temperature Water
Mon (Symp. 07):	Apparatus, Materials and Monitoring Instrumentation for Applications at High Temperatures and Pressures
PCC (Symp. 08):	Power Cycle Chemistry
Geo (Symp. 09):	Hydrothermal Geochemistry
Green (Symp. 10):	Green Energy
CO ₂ (Symp. 11):	CO ₂ in Power Generation – Challenges in Capture, Transportation and Storage
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