WRI-11 Final Schedule of Oral and Poster Presentations

Please note that Poster Sessions have been highlighted at this meeting, and many pre-eminent scientists have been assigned poster presentations, including previous Secretary Generals of this conference. The poster sessions will occur on Monday afternoon and Tuesday evening (Poster Session 1, 109 posters) or Wednesday and Thursday afternoons (Poster Session 2, 94 posters) as noted in the Program Overview. Beer will be provided at all sessions. All poster presenters will have the opportunity to make short oral presentations about their posters if they wish.

Monday

Monday Opening Session and Plenary	
Time	**Abstract**
8:00	Opening Ceremony
8:30	Plenary: Control of dilation and collapse during weathering and soil formation on Hawaiian basalts *O.A. Chadwick, R.D. Goldstein*
9:00	Plenary: Chemical weathering in steady-state orogens--examples from the Himalaya and Southern Alps *C.P. Chamberlain, J.R. Waldbauer*
Oral Session Schedule: Geomicrobiology: A symposium in honor of Henry Ehrlich	
Program Block: Monday Session A1	
Time	**Abstract**
10:00	Keynote: Those crystalline mineral garments bacteria sometimes wear *T.J. Beveridge*
10:20	Bioformation of magnetite and its relevance for redox transformations of trace elements *T. Behrends, P. van Cappellen*
10:40	Keynote: Synchrotron-based studies of microbe-metal ion-mineral interactions *G.E. Brown, A.S. Templeton, T.P. Trainor, A.M. Spormann, T.H. Yoon, K. Benzerara*
11:00	In-situ structural characterization of biogenic manganese oxides produced by Bacillus sp. strain SG-1 in seawater *S.M. Webb, J.R. Bargar, B.M. Tebo*
11:20	Molybdenum control of primary production in the terrestrial environment *S.R. Gislason, E.S. Eiriksdottir*
11:40	Marine calcification and decalcification studied with microsensors for calcium, pH and oxygen *D. de Beer, F. Al-Horani*
Program Block: Monday Session A2	
Time	**Abstract**

1:30	Keynote: The genetics of geochemistry *D.K. Newman*
1:50	Interactions between iron sulfide and DNA *C.A. Heywood, D. Rickard, J.C. Fry, G. Webster, A.J. Weightman*
2:10	Bioalteration of submarine volcanic glass from the Ontong Java Plateau *N.R. Banerjee, K. Muehlenbachs, H. Furnes*
2:30	Accumulation of Hg onto aquatic plant biomass *C. Lacher, R.W. Smith*
2:50	Organic geochemical insights into the role of microorganisms during mineral precipitation *R.D. Pancost, S. Pressly, J.M. Coleman, L. Benning, J.S. Sinninghe Damsté, B. Mountain*
3:10	Transport and attachment of Cryptosporidium parvum öocysts and microsphere analogs in karstic limestone of the Biscayne aquifer, Miami-Dade County, Florida *C.L. Osborn, J.N. Ryan, R.W. Harvey, D.W. Metge, L.L. Landkamer, R.A. Renken, K.J. Cunningham, A.M. Shapiro*

Ehrlich Session: Abstracts to be presented as Posters in the Monday-Tuesday Poster Session

Effect of bacterial metabolism on Cd adsorption to bacterial surfaces
D.A. Ams, J.B. Fein, J. Schaefer, M.A. Schneegurt, A.N. Wedel

The mechanistic consequences of microbial surface colonization on carbonate mineral dissolution
K.J. Davis, A. Lüttge, P.G. Conrad

The effects of siderophores on Cd adsorption to kaolinite
S.E. Hepinstall, P.A. Maurice

Micro-scale mineralogic controls on microbial attachment to silicate surfaces: the influence of iron and phosphate mineral inclusions
J.A. Roberts, B.T. Hughes, D.A. Fowle

Kinetics of bacteria deposition to oxide mineral surfaces
B.F. Turner, J.B. Fein

Anaerobic bacterial reduction of Fe^{III} in pisolites
B. Yan, T. Abrajano, M. Newville, S. Sutton, N.C. Sturchio, H. Ehrlich

Enhanced dissolution in the presence of methanogens
E.M. Hausrath, L.J. Liermann, S.L. Brantley

Monday

Oral Session Schedule: Complexity of mineral surfaces: Experimental and theoretical studies	
Program Block: Monday Session B1	
Time	**Abstract**
10:00	Etch pit morphology and magnesium inhibition of calcite dissolution *R.S. Arvidson, K.J. Davis, M. Collier, A. Luttge, J.E. Amonette*
10:20	Coupled dissolution/precipitation rates in the system $CaCO_3$-$CdCO_3$ *P. Cubillas, M. Prieto, S. Köhler, E.H. Oelkers*
10:40	The surface chemistry of carbonates, a new approach *M. Wolthers, L. Charlet, P. Van Cappellen*
11:00	Kinetics of elementary steps on cleaved dolomite surfaces in undersaturated alkaline aqueous solutions *S.R. Higgins, X. Hu, K.G. Knauss*
11:20	Role of molecular oxygen in the dissolution of siderite and rhodochrosite *S.T. Martin, O.W. Duckworth*
11:40	Interaction between galena surface and dissolved organic ligands: a chemical kinetic study *G. DeGiudici, L. Fanfani, P. Lattanzi*
Program Block: Monday Session B2	
Time	**Abstract**
1:30	New insights into the orthoclase dissolution mechanism with X-ray reflectivity *P. Fenter, C. Park, L. Cheng, Z. Zhang, N.C. Sturchio*
1:50	Chemical alteration of feldspar: a comparative study using SIMS and HRTEM/EFTEM *R. Hellman, J.-M. Penisson, R.L. Hervig, J.-H. Thomassin, M.-F. Abrioux*
2:10	Cation sorption at the muscovite-water interface using X-ray reflectivity *K.L. Nagy, N.C. Sturchio, M.L. Schlegel, P. Fenter*
2:30	Temperature-effects and structure at the rutile-water interface *D.J. Wesolowski, L.M. Anovitz, P. Bénézeth, A.A. Chialvo, D.A. Palmer, P. Fenter, L. Cheng, N.C. Sturchio, Z. Zhang, M.J. Bedzyk, J.D. Kubicki, M.V. Fedkin, S.N. Lvov, D. Sykes, P.T. Cummings, M.K. Ridley, M.L. Machesky, M. Předota, A.V. Bandura*
2:50	Using time-lapse ATR-FTIR spectroscopy to investigate reactions at the water-rock interface *M.J. Borda, D.L. Sparks, M.A.A. Schoonen, D.R. Strongin*

3:10	Influence of nanoscale porosity on fluid behavior *D.R. Cole, M.S. Gruszkiewicz, J.M. Simonson, A.A. Chialvo, Y.B. Melnichenko, G.D. Wignall, G.W. Lynn, J.S. Lin, A. Habenschuss, B. Gu, K.L. More, T.D. Burchell, A. Striolo, Y. Leng, P.T. Cummings, W.T. Cooper, M. Schilling, K.E. Gubbins, H. Frielinghaus*

Mineral Surface Complexity Session: Abstracts presented as Posters in the Monday-Tuesday Poster session

Galena dissolution in acidic pH at 25 °C
J. Cama, P. Acero, C. Ayora
Modifications of mineral surfaces in hydrothermal solutions and their reaction kinetics
X. Zhang, R. Zhan
Competitive arsenate and silicate sorption by thermal water scales
C.E. Tommaseo, M. Kersten

Monday

Oral Session Schedule: Weathering Studies at All Space and Time Scales	
Program Block: Monday Session C1	
Time	**Abstract**
10:00	Chemical weathering and CO_2 fluxes in the Canadian Cordillera *J.D. Spence, K.H. Telmer*
10:20	Hydrochemical evolution and contempory weathering rates in a soil chronosequence, Merced, California, USA *A.F. White, M.S. Schulz, D. Vivit, A.E. Blum*
10:40	Mineral dissolution at the granite-saprolite interface *H.L. Buss, S.L. Brantley, P.B. Sak, A.F. White*
11:00	Keynote: Cosmogenic nuclide methods for measuring long-term rates of physical erosion and chemical weathering *J.W. Kirchner, C.S. Riebe, R.C. Finkel*
11:20	Calcium stable isotope evidence for three soil calcium pools at a granitoid chronosequence *T.D. Bullen, J.A. Fitzpatrick, A.F. White, M.S. Schulz, D.V. Vivit*
11:40	Mineral weathering sources of calcium in northeastern USA forests *J.D. Blum, C.A. Nezat, R.D. Yanai, S.P. Hamburg, M.A. Arthur*
Program Block: Monday Session C2a	
Time	**Abstract**

1:30	Metal Mobility, Transport, and Fate During Weathering of Devonian Metalliferous Black Shale *M.L.W. Tuttle, G.N. Breit*
1:50	Organic matter weathering and atmospheric oxygen: A field and modeling study of black shale oxidation *R.A. Berner, E.W. Bolton, R.A. Wildman, S.T. Petsch*
2:10	Laboratory study of chemical weathering of Middle Ordovician black shales *P.A. Abanda, R.E. Hannigan*

Oral Session: Special Session on Saratoga	
Time	**Talk Title**
6:00	Saratoga Springs: Geochemistry to Horses *D. Siegel*

Weathering Session: Abstracts presented as Posters in the Monday-Tuesday Poster Session

Field vs. lab pH in remote wells, Konza Prairie LTER site, and implications for limestone weathering
G.L. Macpherson

Dissolution of Cr-containing muscovite under oxidizing and non-oxidizing conditions
G. Lee, J.G. Hering

Chemical denudation in the western Indies: Preliminary data indicate relatively low denudation rates
J. Gaillardet, S. Rad, P. Louvat, C. Allègre

How potent is soil CO2 as an acidification and weathering agent?
N.-H. Oh, D.D. Richter

Chemical weathering along a deposequence of glacial loess-derived soils in Alaska
S.P. Anderson, D.H. Mann, A.E. Blum

Geochemical and isotopic constraints on the sources of arsenic in groundwater from Coastal Maine, New England
R.A. Ayuso, N.K. Foley

Processes controlling weathering rind advancement on Costa Rican basalt clasts
A.K. Navarre, P.B. Sak, S.L. Brantley

Bound water as an accumulator of solar energy by weathering products
S.L. Shvartsev

Origin and mixing of groundwaters from Lupin (Canada): Nd isotope evidence
P. Négrel, J. Casanova, R. Blomqvist

Si cycling in a marine chronosequence demonstrated by pore-water Ge/Si ratios
D.V. Vivit, M.S. Schulz, A.F. White, S.P. Anderson

Effects of giant sequoia on soil chemistry
J. Moore, A.F. White, S.L. Brantley

The effect of organic ligands on basalt and granite weathering
A. Neaman, J. Chorover, S.L. Brantley
Contributions of chemical weathering and physical erosion of soil to landscape lowering in a granitic terrain
E.G. Green, S.A. Welch, W.E. Dietrich, J.F. Banfield

Oral Session Schedule: Environmental Geochemistry Session Monday C2b	
Start Time	**Abstract**
2:30	Arsenic accumulation in ferric oxyhydroxides formed within shallow sediments of Bangladesh *G.N. Breit, A.L. Foster, R.B. Perkins, J.C. Yount, T. King, A.H. Welch, J.W. Whitney*
2:50	Trace metal enrichment of stream sediments in the Appalachian Basin *J.M. Morrison, M.B. Goldhaber, L. Lee, E.R. Irwin*
3:10	Resolving the scale dependency between laboratory and field weathering rates for the assessment of mine water pollution *S.A. Banwart, S. Zhang, K.A. Evans*

Poster Session: Environmental Geochemistry (Monday and Tuesday Poster Session)

The effect of wetting-drying cycles on radiogenic isotope release during the dissolution of granitoids
G. Anselmi, Y. Erel, J.D. Blum, J. Ganor

Environmental chemistry of heap leach wastes from the Furtei gold mine, Sardinia, Italy
R. Biddau, C. Pirinu, P. Lattanzi, P. Zuddas

Waste lakes: origin, evolution, and influence on the environment
S.B. Bortnikova, M. Zelenski

Diel cycling of Zn, Mn, and Cu in a stream impacted by acid rock drainage
T. Chapin, R.B. Wanty

Geochemistry of As in a deltaic environment

D. Chatterjee, S. Chakraborty, J. Jana, P. Mukherjee, M. Sarkar, B. Nath

Preliminary research on organic contamination of shallow-bed ground water in a semiarid area
H. Chen, D. Zhang, Z. Shen, J. He, H. Li

Effects of rebound on groundwater quality in mining environments
R. Cidu

Environmental geochemistry of an undisturbed volcanogenic massive sulfide deposit, Red Mountain, Bonnifield mining district, Alaska
R.G. Eppinger, P.H. Briggs, C. Dusel-Bacon

Regional– and mine-based hydrogeochemistry at the Pasminco Rosebery mine, western Tasmania, Australia
L.R. Evans, D.R. Cooke, G. Davidson, G. Doherty

Arsenic migration from weathering metasedimentary rocks of coastal Maine
N.K. Foley, R.A. Ayuso, J. Ayotte, G.R. Robinson

Leaching/adsorption tests on As-contaminated samples from the Baccu Locci mine, Italy
F. Frau, C. Ardau, L. Rundeddu

Noble gases study applied to a uranium mine (Cáceres, Spain)
A. Garralón, P. Gómez, M.J. Turrero, L. Sánchez, B. de la Cruz

Heavy metal mobility through the drainage system of disposed sulfide-bearing wastes
O.L. Gaskova, S.B. Bortnikova

Transport of As by Fe colloids in groundwater related to a granite-hosted U mine
P. Gómez, A. Garralón, B. Buil, M.J. Turrero, L. Sánchez, B. de la Cruz

Water-rock interactions in the upper Salmon River watershed, central Idaho
J.M. Hammarstrom, R.G. Eppinger, B.S. Van Gosen, P.H. Briggs, A.L. Meier

Major and trace elements in scales in pipes from well 9, Reykjanes, Iceland
V. Hardardóttir

Water-soil interaction and solute transport at a crude-oil spill site
W.N. Herkelrath, G.N. Delin

The effect of secondary precipitates on the dissolution rate of calcite in AMD solutions
D.M.C. Huminicki, J.D. Rimstidt

Origin, fate, and transport of ^{228}Ra and ^{226}Ra in groundwater and public drinking water, Pensacola, Florida, USA
W.C. Isphording

Geochemical factors controlling the mobility of antimony in contaminated soils
C.A. Johnson, H. Moench, A.K. Leuz

Hydrogeological modeling for establishment of protection perimeters in the coastal zone between Rabat and Kenitra (Morocco)
N. Kassou, I. Kacimi, T. Bahaj, M. El Wartiti, J. Chao, B. El Mansouri

Environmental impacts of petroleum production: Results from the OSPER "A" site, Osage County, Oklahoma, USA
Y.K. Kharaka, J.K. Otton, M.M. Abbott

Evaluation of remediation alternatives in streams affected by acidic, metal-rich drainage
B.A. Kimball, R.L. Runkel, K. Walton-Day

Arsenic and antimony redistribution within a cyanide-bearing tailings impoundment
E.V. Lazareva, O.V. Shuvaeva, V.G. Tsimbalist, S.B. Bortnikova

Carbon dioxide in the Saratoga Springs: Isotopic evidence for magmatism in the Lower Hudson Valley
K.A. Lesniak, D.I. Siegel

South china karst aquifer: Storm-scale hydrochemistry
Z. Liu, C. Groves, D. Yuan, J. Meiman

Mass balance modeling of dissolved copper loading to the Berkeley Pit, Montana, USA, and estimates of pit wall leaching
A.S. Maest, J.J. Metesh, T.E. Duaime

C-S-Fe geochemistry of an artificial wetland treating acidic colliery spoil leachate
M.I. Morrison, A.C. Aplin

Structural setting and groundwater chemistry in the Umbria-Marche Adriatic region (central Italy)
T. Nanni, P. Vivalda

The role of loess in groundwater pollution at Salí River basin, Argentina
H.B. Nicolli, A. Tineo, J.W. García, C.M. Falcón, M.H. Merino, M.C. Etchichury, M.S. Alonso, O.R. Tofalo

Corrosion of Yucca Mountain high-level radioactive waste canister material
A.A. Olsen, J.D. Rimstidt, A. Barkatt, A. Pulvirenti

Impact of oil production fluid releases at the USGS' OSPER "B" site, Osage County, OK, USA
J.K. Otton, W.N. Herkelrath, Y.K. Kharaka, R.A. Zielinski

High boron contents of the Kizildere geothermal waters, Turkey
N. Özgür, D. Yaman, M. Wolf, W. Stichler

Migration ability of heavy metals and As in water-soil system in metallurgical region
E.N. Pentcheva, N. Velitchkova, R. Atanassova, A. Benderev, M. Karadjov

Water-metallurgical waste interaction as a source of secondary soil and water pollution
E.N. Pentcheva, R. Atanassova, L. Van't dack

Geochemical characterization of mine waste from the Ely copper mine in Vermont, USA
N.M. Piatak, J.M. Hammarstrom, R.R. Seal

Environmental and health risk assessment maps: application of geochemical survey data
S. Rapant, M. Lipovská, M. Khun, Z. Zenisova

Variability of acid mine drainage compositions
J.D. Rimstidt

Persistence and migration of manure-derived solutes in soil water underlying an agricultural watershed: 17□-Estradiol, As, and nutrients
M.E. Schreiber, Y.S. Yi, J.S. Herman

Environmental geochemistry of drainage from the abandoned Elizabeth Cu mine, USA
R.R. Seal II, J.M. Hammarstrom, N.M. Piatak, L.S. Balistrieri

Mineralogical aspects of flue gas desulfurization systems
J. Troby, R. Abart, K. Bärnthaler

Hydrogeochemisty of an acidic, alpine watershed, Redwell basin, Colorado
P.L. Verplanck, R.B. Wanty, B.R. Berger, M.L. Tuttle, B.A. Kimball, G.L. Farmer

Speciation of As in soils from an As-affected area of southern Datong Basin, China
Y. Wang, H. Guo

Resolving natural and anthropogenic sources of solutes to a watershed with historic mining
R.B. Wanty, P.L. Verplanck, B.A. Kimball, M.L. Tuttle, R.L. Runkel, B.R. Berger

Toward a quantitative understanding of reactive surface hydroxyl density in feldspar minerals
N.M. Washton, R. Fry, S.L. Brantley, K.T. Mueller

PAH distribution in surface sediments from New York/New Jersey Harbor Complex
B. Yan, L. Benedict, R. Bopp, T. Abrajano, D. Chaky

Nitrate contamination as a cause of the high incidence of esophagus cancer at Linzhou & Anyang, Henan province, P.R.China
A. Zhou, H. Ming, Y. Yang, H. Cai, C. Liu

Poster Session: Groundwater and Sedimentary WRI (Monday and Tuesday)

Geothermal potential of thermal waters of Manikaran, Himachal Pradesh, India
M.A. Alam, D. Chandrasekharam, A. Minissale

Geochemical and isotope features of brines of the Siberian platform
S.V. Alexeev, L.P. Alexeeva, O. Shouakar-Stash, S.K. Frape

Modeling of Tracer Behaviour and Dominant Reactions during the Pore Water Chemistry (PC) Experiment in the Opalinus Clay, Switzerland
D. Arcos, T. Gimmi, L. Duro, H.N. Waber

Aspects of groundwater geochemistry from Middle Atlas and Saiss basin (Northern Morocco)
T. Bahaj, M. Wartiti, A. Essahlaoui, M. Zahraoui, R. Caboi

Processes affecting groundwater quality in a basalt aquifer system in southern Australia
D.A. Bennetts, J.A. Webb

U transport at Itataia U-deposit, Brazil
D.M. Bonotto, R.C.S. Kesselring, J.R.L.V. Leal

Smectite-to-illite reaction vs. quartz kinetics in shale from the Haltenbanken area
M. Bruvoll, J.S. Jahren, P. Aagaard

Origin of brines from the Bachu Uplift, Tarim Basin, China: chemistry and $\square^{11}B$ evidence
C. Cai, H. He, B. Mei, Y. Xiao

Use of a gel probe sampling device to examine porewater profiles and the effects of porewater composition on As sorption in sediments
K.M. Campbell, S. Dixit, J.G. Hering

^{14}C and ^{36}Cl as indicators of groundwater flow, Bland Catchment, NSW
E.A. Carrara, T.R. Weaver, I. Cartwright, R.G. Cresswell

Mobilization of F^- from rocks and soils in to the groundwater, Morel River basin, Rajasthan, India
H.T. Chaturvedi, D. Chandrasekharam

Geochemical baseline as basis for the European Groundwater Directive

W.M. Edmunds, P. Shand

Geochemistry of groundwater in the Gharb plain aquifers (Northern-Morocco)
N. El Mahmouhi, M. El Wartiti, M. Zahraoui, R. Caboi

Hydrogeochemistry of the Lake Cooper region, Murray Basin
K. Hannam, I. Cartwright, T.R. Weaver

Origin of dolomites in the phosphatic Upper Cretaceous Duwi Formation, Eastern Desert, Egypt
H. Holail, M. Shaaban, M. El-Askary, M. Rashed

Groundwater age, chemistry and evolution in fractured granite, Uveghuta, Hungary
I. Horvath, T. Szocs, G. Toth

Geochemical characteristics in the coastal aquifer of the Mamora plain
I. Kacimi, T. Bahaj, N. Kassou, M. Wartiti, R. Caboi

Earthquakes influencing geothermal water-rock interaction in Iceland
H. Kristmannsdóttir, V. Hardardóttir

Fracture-related geochemical controls on As concentrations in ground water
G. Lipfert, A. Reeve

Renewal of Fe used to remove TCE in simulated high alkalinity groundwater by ultrasound
F. Liu, R. Gillham, L. Gui

Processes controlling groundwater chemistry of a coastal area in SE Sardinia (Italy)
M. Lorrai, L. Fanfani, P. Lattanzi, R.B. Wanty

New method for porewater extraction from claystone and determination of transport properties with results for Opalinus Clay (Switzerland)
U.K. Mäder, H.N. Waber, A. Gautschi

^{13}C enrichments in periglacial biogenic carbonates may be due to acetogenic processes instead of methanogenesis
M.E. Marschner, I.D. Clark

Why are recent groundwaters sea-tagged and fresh, whereas formation waters are brine-tagged and saline?
E. Mazor

Impact of Pleistocene glaciation on hydrogeochemistry of Devonian carbonate groundwaters, northern margin Michigan Basin
J.C. McIntosh, L.M. Walter

Incipient alteration of biotite by groundwater in fractured rock
J. McMurry

Hydrochemistry of groundwater on both sides of the Jordan - Dead Sea - Arava transform fault
P. Möller, P. Dulski, S. Geyer, E. Rosenthal, Y. Guttman, E. Salameh

U-series evidence of water-rock interaction at Yucca Mountain, Nevada, USA
J.B. Paces, L.A. Neymark

The evolution of groundwater in the Tyrrell region, south-central Murray Basin, Victoria, Australia
B. Petrides, I. Cartwright, T.R. Weaver

Geochemical and isotopic study of groundwaters in Cerro Prieto, BC, México
E. Portugal, G. Izquierdo, J. Álvarez

Chemical and isotopic characteristics and origin of high-pH thermal springs near Acapulco, State of Guerrero, México
A. Ramírez-Guzman, Y. Taran

Two stages of cation exchange in the geochemical evolution of seawater intrusion into the coastal aquifer of Israel
O. Sivan, Y. Yechieli, B. Herut, B. Lazar

Experimental and numerical simulation of carbonate dissolution and porosity development by organic acids
H.Y. Tseng, V. De Choudens-Sánchez, G.A. Otten, A.B. Herhold

Controls on REE during groundwater flow and mixing in fractured rock aquifers
S.O. Tweed, T.R. Weaver, I. Cartwright

Geochemical characterization of a volcanic-sedimentary aquifer in Central Italy
R. Vivona, E. Preziosi, G. Giuliano, D. Mastroianni, F. Falconi, B. Madé

Models for development of dryland salinity, Murray Basin, Australia
T.R. Weaver, A. Bush, T. Singh, I. Cartwright, E. Irvine

Results from the Porewater Chemistry Experiment in Opalinus Clay at Mont Terri, Switzerland
P. Wersin, A. Gautschi, H.E. Gäbler, F.J. Pearson, A. Vinsot, K. Hama, P. DeCannière, Y. Mahara, P. Hernán, E. Gaucher

Hydrochemistry of groundwaters in Quaternary aquifers: a case study at Taiyuan, China
S. Yan, Q. Guo, Y. Wang, R. Wang

Geochemistry and fluxes of strontium and barium in subsurface water in the central part of the Russian plate
V.P. Zverev, I.A. Kostikova, N.N. Bogdanova

Wednesday

Wednesday Plenary	
Time	**Abstract**
8:30	Plenary: The silicification of microorganisms: A comparison between *in situ* experiments in the field and laboratory *L.G. Benning, B.W. Mountain*
9:00	Plenary: Arsenic mobilization from contaminated sediments: A full-scale experiment in progress *J.G. Hering, S. Dixit, K. Campbell, P.A. O'Day*

Wednesday

Oral Session Schedule: Ehrlich Session Wednesday Session A1a	
Start Time	**Abstract**
10:00	Keynote: Current challenges in modeling metal adsorption onto bacterial surfaces *J.B. Fein*
10:20	Modeling microbial enhancement of Zn^{II} and Pb^{II} transport in columns packed with geologic media *L.L. Landkamer, R.W. Harvey, D.W. Metge, J.N. Ryan*
10:40	Linking bacteria-metal interactions to mineral attachment: A role for outer sphere complexation of cations? *D.A. Fowle, E. Kulczycki, J.A. Roberts*

Oral Session Schedule: Groundwater and Sedimentary WRI Session Wednesday Session A1b	
Start Time	**Abstract**
11:00	Hydrogeology of the Goulburn Valley, Murray Basin, Australia *I. Cartwright, T.R. Weaver*
11:20	The origin and age of groundwater in the Nubian Sandstone aquifer in the Negev, Israel *A. Vengosh, S. Hening, J. Ganor, T.D. Bullen, C.E. Weyhenmeyer, N.C. Sturchio, A. Paytan*
11:40	Rapid growth of meter-scale calcite speleothems in the Mission Tunnel, Santa Barbara, CA *J.R. Boles*

Wednesday

Oral Session Schedule: Advances in spectroscopic and microscopic techniques for the study of water-rock interactions	
Program Block: Wednesday Session B1	
Time	**Abstract**
10:00	Solid-phase arsenic speciation in roaster-derived gold mine tailings *S.R. Walker, H.E. Jamieson, C.F. Andrade, A.T. Lanzirotti*
10:20	Keynote: The role of synchrotron radiation in advancing the frontiers of water-rock interactions *D.L. Sparks*
10:40	X-ray spectroscopic techniques to probe the microbial dissolution of basaltic glasses *A.S. Templeton, B.M. Tebo, H. Staudigel, B.E. Bailey, T.P. Trainor, P.J. Eng*
11:00	^{19}F-NMR study Al-oxyhydroxide surfaces and reactions *B.L. Phillips, A. Lee, W.H. Casey*
11:20	SEM-CL imaging of hydrothermal quartz – lessons and applications *G. Bignall, N. Hirano, B. Batkhishig, N. Tsuchiya, B. Rusk, K. Sekine*
11:40	Raman spectroscopic method for quantitative analysis of binary aqueous organic solutions *I-M. Chou, R.C. Burruss*

Oral Session: Weathering Program Block: Wednesday Session C1	
Time	**Abstract**
10:00	Influence of fluoride and phosphate on the formation, stoichiometries and structures of hydroxyaluminosilicates *S. Strekopytov, C. Exley*
10:20	Feldspar dissolution rates and clay precipitation in the Navajo aquifer at Black Mesa, Arizona, USA *C. Zhu, A. Blum, D. Veblen*
10:40	Sphalerite weathering kinetics: Effect of pH and particle size *M.E. Malmström, C. Collin*
11:00	Tracing silicate weathering and terrestrial silica cycling with Ge/Si ratios *A.C. Kurtz, L.A. Derry*
11:20	The significance of suspended material in the chemical transport in rivers of NE Iceland *E.H. Oelkers, S.R. Gislason, E.S. Eiriksdottir, S.O. Elefsen, J. Hardardotti*

11:40	Connecting the molecular- with the macro-scale: An integrated approach towards a quantitative understanding of crystal dissolution *A. Lüttge*

Thursday

Thursday Plenary	
Time	**Abstract**
8:30	Plenary: Origin of the carbon dissolved in the groundwater and derivation of Earth diffuse emission of CO_2: the case of the Italian Peninsula *G. Chiodini, S. Caliro, C. Cardellini*
9:00	Plenary: Polymeric silicate complexing in aqueous fluids at high pressure and temperature, and its implications for water-rock interaction *C.E. Manning*

Thursday

Oral Session Schedule: Reactivity of Organic Compounds During Water-Rock Interactions	
Program Block: Thursday Session A1	
Time	**Abstract**
10:00	Isotopic constraints on the origin of BTEX, phenol and carboxylic acids in oilfield waters *A.C. Aplin, G. Taylor, G.D. Love, S.R. Larter*
10:20	Oilfield water sample quality: effect of H_2O mass transfer between water and hydrocarbons *R.A. McCartney, T. Østvold*
10:40	Does methane react during thermochemical sulphate reduction? Proof from the Khuff Formation, Abu Dhabi *R.H. Worden, P.C. Smalley*
11:00	Properties of isolated humic substances from Callovo-Oxfordian and Opalinus clay *F. Claret, T. Schäfer, T. Rabung, A. Bauer, G. Buckau, T. Fanghänel, M. Wolf*
11:20	Photoreduction of Bicarbonate – the Role of Minerals in Prebiotic Synthesis *X. Zhang, S.T. Martin, C.M. Friend, F.M. Michel, M.A.A. Schoonen*
11:40	Investigations of the effects of mineral mesopores on the adsorption and preservation of organic matter *A.R. Zimmerman, S.L. Brantley, K.W. Goyne, J.D. Chorover*

Thursday

Oral Session Schedule: Radionuclide Interactions with Minerals and Microbes(S2)	
Program Block: Thursday Session B1	
Time	**Abstract**
10:00	Mineral formation and radionuclide sorption in waste-impacted Hanford sediments *J. Chorover, P. Rotenberg, R.J. Serne*
10:20	Influence of humic acids on the aigration of $U^{(IV/VI)}$ in quartz sand *J. Mibus, S. Sachs, C. Nebelung, G. Bernhard*
10:40	U Adsorption onto Bacillus subtilis bacterial cell walls *D. Gorman-Lewis, J.B. Fein*
11:00	Interactions of the U mining waste pile isolate *Bacillus sphaericus* JG-A12 with U *J. Raff, M. Merroun, S. Selenska-Pobell, A. Rossberg, U. Soltmann, H. Böttcher*
11:20	Remobilization of precipitated and cell-associated uranium in brines *C.J. Dodge, J.B. Gillow, A.J. Francis*
11:40	EXAFS study of uranyl adsorption on Wyoming montmorillonite *J.G. Catalano, G.E. Jr. Brown*
Program Block: Thursday Session B2	
Time	**Abstract**
1:30	Pu^{V} Removal from Solution by Oxidation and Adsorption onto Manganese Dioxide *S.A. Stout, S.D. Reilly, D.M. Smith, M.P. Neu*
1:50	U, Th, Eu and colloid mobility in a granite fracture under near-natural flow conditions *T. Schäfer, H. Geckeis, M. Bouby, T. Fanghänel*
2:10	Depleted U in sediments of Patroon Reservoir, Albany, NY, USA *J.G. Arnason, B.A. Fletcher*

Radionuclide Interactions with Minerals and Microbes Session: Abstracts presented as Posters in the Wed-Thurs Poster Session

The role of secondary mineral precipitates on radionuclide sequestration at the Hanford Site
W. Um, R.J. Serne, S.B. Yabusaki, V.L. Freedman, S.D. Samson, K.L. Nagy

An experimental study of the dissolution rates of apatite and britholite as a function of solution composition and pH from 1 to 12
C. Chaïrat, E.H. Oelkers, S. Köhler, N. Harouiya, J-E. Lartigue
Evaluation of Sn^{IV} sorption on Callovo-Oxfordian from equilibrated sedimentary waters
C. Latrille, J. Ly

Oral Session Schedule: Crustal Fluid-Rock Interactions, Mass Transfer, and Cycling of Volatiles (S11)	
Program Block: Thursday Session C1	
Time	**Abstract**
10:00	Influence of grain boundary energy on fluid distribution in deep-seated rocks *D.A. Wark, E.B. Watson*
10:20	Modeling contact metamorphism of siliceous dolomite via kinetic control of overall reactions *E.W. Bolton, D.M. Rye, J.J. Ague, A. Lüttge*s
10:40	Dating fluid infiltration using monazite *J.C. Ayers, M. Loflin, C.F. Miller, M.D. Barton, C. Coath*
11:00	Kinetics study of silicate mineral dissolution in water at high temperatures near the critical point of water *R. Zhang, S. Hu, X. Zhang, C.P. Shi, J. Zhang*
11:20	Geochemistry of quartz and calcite veins in a paleoaccretionary complex *Z. Berner, D. Stüben, E. Seidel*
11:40	About the role of water in the metamorphic alteration of ultrabasic rocks *A.A. Grigorian, S.B. Abovian*
Program Block: Thursday Session C2	
Time	**Abstract**
1:30	Sulfur geochemistry of Paleozoic rocks, U.S. mid-continent: Implications for large-scale fluid flow and ore genesis *M.B. Goldhaber*
1:50	Role of water-rock interaction in the formation of La Azul fluorite deposit, southern Mexico *T. Pi, J. Solé, Y. Taran, P. Alfonso*
2:10	Fluid-rock interactions within Paleoproterozoic gold mineralization of the Sakoli Group, India *A.S. Venkatesh, B. Jose, T. Srinivas*

Crustal Fluids Session: Abstracts presented as Posters (Wednesday-Thursday poster session)

High-precision isotopic analysis of nanomole quantities of silicate nitrogen
G. Bebout, B. Idleman, L. Li, A. Hilkert
Mineral chemical records of prograde devolatilization in Alpine HP/UHP metasediments
G. Bebout, R. King, P. Agard, K. Kobayashi, E. Nakamura
Mineralogy and mobility of chemical elements at water-basalt interaction, Hole 504B
V.B. Kurnosov, B.P. Zolotarev, A.V. Artamonov
Water-rock interaction responsible for the origin of high pH mineral waters (S. Portugal)
J.M. Marques, M.J. Matias, M.J. Basto, R.C. Graça, L. Aires-Barros, M. Andrade, P.M. Carreira, G. Goff, L. Rocha
The isotopic heterogeneity of carbon in metamorphic complexes
O.V. Avchenko, S.N. Lavrik, I.A. Alexandrov, T.A. Velivetskaya
Contribution of fertilization practices to nitrate contamination of groundwater
H. Guo, G. Li, D. Zhang, F. Yan, X. Zhang, C. Lu
Barite as an indicator of cross-formational fluid flow
D. Savage
Micropore diffusion catalytic effect significance in water-rock interaction
L.I. Shabalin

Thursday

Oral Session Schedule: Aqueous Geochemistry and Biogeochemistry Session Thursday	
Start Time	**Abstract**
1:30	Streamflow generation in upland impermeable catchments--is there a need to think deeper? *P. Shand, D.P.F. Darbyshire, A.H. Haria, J. Davies, K. Griffiths*
1:50	The biogeoscience of worm-mineral interaction *S.J. Needham, R.H. Worden, D. McIlroy*
2:10	From Cu, Mn, Mo speciation in the natural environment to their speciation in the body *K.V. Ragnarsdottir*

Poster Session: Aqueous Geochemistry and Biogeochemistry (Wednesday-Thursday poster session)

Microbial geochemistry of some Philippine hot springs
T. Abrajano, B. Yan, R. Manson, A. Mejorada

Mo stable isotope biogeochemistry
A.D. Anbar

Plant effects on chemical weathering and denudation processes: Experimental ecosystem studies
Z. Balogh, C. K. Keller, J. T. Dickinson, D. Wang, G. Hawley, T. Coe

Biogeochemistry of P in needle-fir broad-leafed forests of the Russian Far East
A.G. Boldeskul, P.V. Yelpatyevsky

Adsorption of heavy metals on manganese oxide coated clay
T. Boonfueng, L. Axe

Cd and proton binding onto bacterial surfaces and humic and fulvic acids
D. Borrok, J.B. Fein

A search for hydrothermal W ligands
V. Cameron, Z. Zhang, C.H. House, S. L. Brantley

Deliquescence of $NaCl$-$NaNO_3$ and KNO_3-$NaNO_3$ salt mixtures at 90ºC
L. Craig, S. Carroll, T. Wolery

Pyrite dissolution in acidic media
M. Descostes, P. Vitorge, C. Beaucaire

Hydrothermal carbon dioxide reduction with magnetite at 400°C and 500 bar
Q. Fu, W.E. Seyfried, Jr. J. Horita

Gypsum precipitation in Red Sea-Dead Sea mixtures--a preliminary study
J. Ganor, A. Avital, G. Eliraz-Ronen, R. Talby, S. Zaaror

Immobilization of phosphate during aeration of nutrient-rich anoxic groundwater
J. Griffioen

Biogeochemical processes in peat under variable flow conditions
R.B. Jr. Herbert

Crystallinities of clay minerals caused by deformation in the Jinshan gold deposit, China
R. Hua, X. Li, J. Ji

Rates of bacterially promoted dissolution of amorphous silica under no-nutrient conditions
M. Kawano, K. Tomita

Biodegradation of dissolved jet-fuel in a pyrite containing aquifer: Biogeochemical modeling of reactive transport
J.B.S. Knudsen, P. Aagaard, G.D. Breedveld

Dissolution rates of talc as a function of solution composition, pH and temperature
S.J. Köhler, E.H. Oelkers, N. Marty

Thermodynamic constraints on the origin of iron in ground water: The water supply of Tomsk, West Siberia, Russia
O.V. Kolokolova, N.A. Yermashova

The importance of surface oxidation on Mn and Fe oxides for the fractionation of Te and Se
A. Koschinsky, J.R. Hein, M. Bau

Cu isotopic fractionation associated with oxidation of Cu sulfide with and without *T. ferrooxidans*
R. Mathur, J. Ruiz, L. Liermann, S. Brantley

Effects of Cd on natural organic matter adsorption to goethite
P.A. Maurice, C. Anthony, L. Arthurs, P. Giesting, S. Golden, S. Hepinstall, G. Liu, A. Lavarnway, B. Mishra, K. Tholen

Dissolution of calcitic prisms of Pinna nobilis: biomineral composition and kinetics
L. Mercury, J.P. Cuif, P. Massard, Y. Dauphin, S. Nakashima

Similarity between sulfate-O, sulfate-S and nitrate-N isotope patterns in forest soil waters
M. Novak, F. Buzek, M. Stepanova, I. Jackova

Concentrations and toxicity of trace metals in black shale draining streams of the Little Red River, Arkansas: preliminary findings
G.M. Ogendi, J.L. Farris, R.E. Hannigan

Chemical modification and Mn enrichment during recharge of treated effluents to a sandy aquifer: The Dan Region Reclamation Project (Israel)
O. Oren, I. Gavrieli, B. Lazar, A. Burg, Y. Guttman

Biologically produced polymers affect calcite dissolution
T.D. Perry, O.W. Duckworth, C.J. McNamara, S.T. Martin, M. Breuker, R. Mitchell

Processes affecting the chemical mass balance of five small, relatively pristine watersheds in the USA
N.E. Peters, J.B. Shanley, B.T. Aulenbach, R.M. Webb

Arsenic in solution and secondary phases in sulfide mine waste, Snow Lake, Manitoba

K.A. Salzsauler, N.V. Sidenko, B.L. Sherriff

Does permafrost have an effect on dissolved organic carbon transport during snowmelt?
P.F. Schuster, M.M. Reddy, G.R. Aiken, J.B. Shanley

Isotopic characteristics of natural waters in the Southern Lowlands of Iceland
Á.E. Sveinbjörnsdóttir, S. Arnórssson, J. Heinemeier, H. Kristmannsdóttir, H. Ármannsson

Seasonal changes in the chemistry of drip waters in Kaite Cave (N Spain)
M.J. Turrero, A. Garralón, J. Martín-Chivelet, P. Gómez, L. Sánchez, A. Quejido, A.I. Ortega, M.A. Martín-Merino

Internal consistent thermodynamic data for the dissociation constant of water K_W
M.P. Verma

The effect of crystallinity and Si content on far-from-equilibrium silicate dissolution rates
D. Wolff-Boenisch, S.R. Gislason, E.H. Oelkers

Characterization and Pb adsorption to iron oxide-coated silica
Y. Xu, L. Axe

Hydrogeochemistry of Bagnara spring (Umbria, Italy) and possible relationship with seismic activity
A.R. Zanzari, F. Frondini, M. Nucci

Spectroscopic methods Session: Abstracts presented as Posters in the Wednesday-Thursday poster session

Study of phosphate layers in Lake Baikal sediments by complex of local methods
S.M. Zhmodik, N.V. Verkhovtseva, N.A. Nemirovskaya, A.T. Titov, E.L. Goldberg, M.A. Fedorin, O.M. Khlystov, A.G. Mironov, N.S. Karmanov, K.V. Zolotarev

Synchrotron micro-tomography of porous media for modeling fluid flow
F. Enzmann, M. Kersten, M. Stampanoni

Detection of a mass transport front in rocks by thermoluminescence technique
M. Yamamoto, N. Tsuchiya

Friday

Friday Plenary	
Time	**Abstract**
8:30	Plenary: Chlorine stable isotopes in sedimentary systems: does size matter? *M. Coleman*

Friday

Oral Session Schedule: Volcanic-Geothermal Water-Rock Interactions and Degassing: A Symposium in Memory of Donald White	
Program Block: Friday Session A1	
Time	**Abstract**
9:45	Keynote: Yellowstone Caldera inflation-deflation and hydrothermal Cl flux revisited *R.O. Fournier*
10:05	Magmatic and fossil components of thermal and mineral waters in the Eger River continental rift (Bohemian massif, central Europe) *T. Paces, V. Smejkal*
10:25	The source and relative age of non-thermal and up to 90°C ground waters in the Skagafjördur tholeiite flood basalt province, N-Iceland *S. Arnórsson, A. E. Sveinbjörnsdóttir*
Program Block: Friday Session A2	
Time	**Abstract**
10:45	Keynote: Oxidation reactions for reduced Fe, As, and S in thermal outflows of Yellowstone National Park: Biotic or abiotic? *D.K. Nordstrom, J.W. Ball, R.B. McCleskey*
11:05	Evidence for metastable equilibrium between hydrocarbons in volcanic gases *Y. Taran, W.F. Giggenbach*
11:25	Monitoring CO_2 Emissions at White Island Volcano, New Zealand; Evidence for Total Decreases in Magmatic Mass and Heat Output *C. Werner, B.W. Christenson, B.J. Scott, K. Britten, G. Kilgour*

11:45	The magmato-hydrothermal system at Copahue volcano, Argentina *J.C. Varekamp, A.P. Ouimette, R. Kreulen*
12:05	Intrusion, degassing and hydrothermal systems in submarine felsic volcanic centers *B.E. Taylor, A. Timbal, G.J. Holk*
Program Block: Friday Session A3	
Time	**Abstract**
1:30	Chemical aspects of exploration of the Theistareykir high-temperature geothermal area, N-E Iceland *H. Ármannsson*
1:50	Experimental study of water-rock interaction in active geothermal fields: Los Azufres, Mexico *W.B. Zhou, Z.S. Zhang, M.G. Li*
2:10	Modeling Hydrothermal Alteration in the Pinatubo Geothermal Field, Philippines *M.I.R.D. Balangue, M.G.B. Collantes, M.T. Mamitag*
2:30	Krypton-81 and water-rock interactions on a million-year time scale *N.C. Sturchio, L.J. Patterson, Z.T. Lu, X. Du, P. Mueller, R. Purtschert, B.E. Lehmann, M.I. Sultan, B. El Kaliouby, Y. Dawood, A.M. Abdallah*
2:50	Experimentation of an automatic continuous monitoring station in a thermal well of Stromboli volcanic island (Italy) *M.L. Carapezza, R. Cioni, M. Guidi, A. Scozzari, L. Pruiti*
3:10	Chemical composition and formation of thermal waters in Kuril's Islands (Far East Russia) *O.V. Chudaev, V.A. Chudaeva, K. Sugimori, A. Kuno, M. Matsuo, D.K. Nordstrom*

White Session: Abstracts presented as Posters in the Wednesday-Thursday Poster Session

Diffuse CO_2 degassing from summit areas on Mt. Hood, Oregon, USA
D. Bergfeld, J.F. Howle, M.E. Schmidt

Thermal springs at Colombian active volcanoes
G. Garzón, S.P. Salazar, D.Y. Serna, L. Bobadilla, L.E. Lesmes, J.C. Diago, J. Mojica

The scaling relationship between self-potential and fluid flow on Masaya volcano, Nicaragua
J.L. Lewicki, G.E. Hilley, C. Connor

Diffuse soil CO_2 degassing at Salcheto (Tuscany) and Lipary (Sicily): a probabilistic approach to mapping and quantification of gas release
C. Cardellini, F. Frondini, N. Morgantini, G. Chiodini, R. Avino, S. Caliro, D. Granieri, M. Russo

Transport of injected isobutane by thermal groundwater in Long Valley caldera, California, USA
W.C. Evans, T.D. Lorenson, M.L. Sorey, D. Bergfeld

Sulfur stable isotope ratios of the Mt. Apo geothermal fluid, Philippines
F.E.B. Bayon, B.M.G. Sambrano
Measurement of trace gas species at White Island volcano, New Zealand, using chemical traps
L.J. Wardell, P.R. Kyle, D. Counce
Geochemical evolution of the young crater lake of Kelud volcano in Indonesia
A. Bernard, A. Mazot
Evidence of mantle derived fluid contributions to the thermal basins of Western Sicily: geotectonic and geodynamic implications
A. Caracausi, R. Favara, F. Italiano, A. Paonita, A. Rizzo, P.M. Nuccio
Major, trace, and rare earth elements in the surface waters of two areas of the Kuril Islands
V.A. Chudaeva, O.V. Chudaev, K. Sugimory, M. Matsuo, A. Kuno
A gas transfer study at Ojo Caliente, Yellowstone National Park, USA
B.R. Druschel, M.J. Borda, M.A.A. Schoonen
Relationships between structural boundaries, fluid circulation and permeability changes during the 2002-2003 Stromboli eruptive crisis
A. Finizola, F. Sortino
A hydrologic-hydrochemical model for the Troitsky Crater Lake, Maly Semyachik, Kamchatka
G.M. Gavrilenko, P.G. Gavrilenko
Nitrogen transformations in hot spring runoff, Yellowstone National Park, USA
J.M. Holloway, R.L. Smith, D.K. Nordstrom
The geochemistry of geothermal waters in the Alvord Basin, southeastern Oregon
A.K. Koski, S.A. Wood
The feasibility of using yttria-stabilized ZrO_2 sensors for pH measurements in geothermal field and industrial applications
M.F. Manna, D.E. Grandstaff, G.C. Ulmer, E.P. Vicenzi
Insight into the hydrothermal system of Papandayan volcano, Indonesia
A. Mazot, A. Bernard
Hydrothermal activity at Tacaná volcano, Mexico-Guatemala
D. Rouwet, Y. Taran, S. Inguaggiato, N. Varley
Fluid geochemistry data processing for integrated assessment of Japanese geothermal resources using GIS: A case study for the Hohi area, Kyushu
H. Shigeno
Transition metals distribution in the rocks from Sierra-Leone Fracture Zone (Central Atlantic)
V.A. Simonov, Y.P. Kolmogorov, A.S. Lapukhov, G.A. Tretyakov
Hydrochemical evolution of the Na-HCO_3 type groundwater from northern Sikhote-Alin (Far East Russia)
N.A. Tchepkaia, G.A. Chelnokov, O.V. Chudaev, V.A. Chudaeva

Chloride in hot springs of the Cascade volcanic arc – the source puzzle
M.C. van Soest, W.C. Evans, R.H. Mariner, M.E. Schmidt
Modeling study of WRI in the Bakki low-temperature geothermal field, south-west Iceland
Z.S. Zhang, H. Ármannsson, H. Kristmannsdóttir
Stable chlorine isotopic composition of geothermal waters from Yellowstone National Park
M. Zhang, M.Y. Hobbs, S.K. Frape, D.K. Nordstrom, J.W. Ball, R.B. McCleskey
Helium and carbon isotopic evidence for the relationship between outgassing and structure in the East African Rift System
W.G. Darling

Friday

Oral Session Schedule: Geochemical Modeling from Molecular to Global Scales	
Program Block: Friday Session B1	
Time	**Abstract**
9:45	Coupling uncertainty analysis with a surface complexation model *J.A. Dyer, N.C. Scrivner, D.L. Sparks*
10:05	Approaches to surface complexation modeling in natural systems *J.A. Davis, D.E. Meece, G.P. Curtis*
10:25	Keynote: Adsorption processes: At what spatial scale do we need to understand them? *L.J. Criscenti*
Program Block: Friday Session B2	
Time	**Abstract**
10:45	Incorporating microbial dynamics in geochemical models *P. Regnier, A.W. Dale, Y. vanLith, P. VanCappellen*
11:05	Molecular simulations of metal-bacteria systems *K.J. Johnson, J.B. Fein, R.T. Cygan*
11:25	Agent-based stochastic simulation of natural organic matter adsorption and mobility in soils *L. Arthurs, P.A. Maurice, X. Xiang, R. Kennedy, G.R. Madey*
11:45	An integrated approach to predict coupled processes at a nuclear waste repository *N. Spycher, E. Sonnenthal, T. Kneafsey, P. Dobson*
12:05	Evaluation of the field-scale cation exchange capacity of Hanford sediments *C.I. Steefel*

Program Block: Friday Session B3	
Time	**Abstract**
1:30	Flow and reactive transport modeling in the framework of GTS-HPF *J.M. Soler, B. Paris, W. Pfingsten, U. Mäder*
1:50	Upscaling calcite dissolution rates using network model simulations *L. Li, C.A. Peters, M.A. Celia*
2:10	Regional modeling of subsurface cadmium transport in the Kempen region, The Netherlands *B. van der Grift, J. Rozemeijer, J. Griffioen*
2:30	Simulation of U^{VI} Transport in Groundwater with Variable Chemical Conditions *G.P. Curtis, J.A. Davis*
2:50	Deliquescence of salts: Concept of key mineral assemblages *T. Wolery, Y. Wang*
3:10	Secular evolution of $\square^{15}N$ in crustal fluids: implications for the origin of Earth's early atmosphere and hydrosphere *Y. Jia, R. Kerrich*

Modeling Session: Abstracts presented as Posters (Wednesday-Thursday poster session)

Effect of temperature on selenate adsorption by goethite
N.N. Vlasova, M. Kersten, D.A. Kulik

Redox evolution modeling of the porewater in the San Pedro Formation, Duero Basin (Spain)
J. Peña, M.J. Turrero, M. Pelayo, P. Gómez, A. Garralón, A. Delgado

Colloidal silica in hydrothermal solution
V.V. Potapov, O.V. Guseva, A.V. Mushinsky

Modeling of geochemical processes in an aquifer infiltrated by a septic plume
C. Spiteri, P. Regnier, P. Van Cappellen, C.P. Slomp, C. Meile

Comparison of experimental and model data for the evaporation of a synthetic Topopah Spring Tuff pore water, Yucca Mountain, USA
M. Alai, M. Sutton, S.A.Carroll

DFT calculations and molecular dynamics simulations on the rutile-water interface
J.D. Kubicki, A.V. Bandura, M. Předota

In search of simplicity in reactive transport models
R.M. Tinnacher, B.D. Honeyman

Experimental leaching of natural cement from Maqarin (Jordan): study and modeling of the alteration processes
L. Trotignon, H. Peycelon, H. Khoury, E. Salameh, U. Mäder, J. Smellie

Friday

Oral Session Schedule: Iron Biogeochemistry (S10)	
Program Block: Friday Session C1	
Time	**Abstract**
9:45	Electron exchange between ferredoxin, cytochrome, and hematite *C.M. Eggleston, N. Khare, P.J.S. Colberg, G. Jordan, M. Etienne*
10:05	Analysis of Fe^{III} oxide reactivity toward long-term bacterial vs. chemical reduction *E.E. Roden*n
10:25	Microbial Fe^{III} oxide reduction: Effect of solubility *S.C. Bonneville, T. Behrends, P. Van Cappellen*
Program Block: Friday Session C2	
Time	**Abstract**
10:45	The role of bacteria in deposition of Banded Iron Formations *K. Konhauser*
11:05	Mechanisms of Fe^{II} Sequestration Following Dissimilatory Iron Reduction of Structurally Diverse Fe^{III} (Hydr)oxides *C.M. Hansel, S. Fendorf, S.G. Benner*
11:25	Red Beans: Intra- and extracellular Fe minerals formed by *S. putrefaciens* *S. Glasauer, S. Langley, T.J. Beveridge, M.I. Boyanov, B. Lai, K.M. Kemner*
11:45	Voltammetric investigation of Fe-Mn-S species in a microbially active wetland *G.K. Druschel, R. Sutka, D. Emerson, G.W. III, Luther, C. Kraiya, B.T. Glazer*
12:05	Biogeochemical cycling in Fe-rich sediments from Lake Matano, Indonesia *S.A. Crowe, S.J. Pannalal, D.A. Fowle, M.T. Cioppa, D.T.A. Symons, G.D. Haffner, B.J. Fryer, R. McNeely, B. Sundby, P.E. Hehanussa*

Fe Biogeochemistry Session: Abstracts presented as Posters (Wednesday-Thursday poster session)

ED-XRD study of ferrihydrite transformation to goethite via the Fe^{II} pathway
N. Yee, T.H. Nguyen, L.G. Benning, S. Shaw

Geochemical properties of inorganic magnetite nanocrystals
D. Faivre, K. Pachana, P. Agrinier, N. Menguy, F. Guyot, P. Zuddas

Effects of natural organic matter photoirradiation on its adsorption to and dissolution of goethite at pH 3.5 and 5.5
M.J. Pullin, C.A. Progess, P.A. Maurice

In-borehole measurements of chemical parameters in a wellfield affected by iron fouling
L.C. Cavé, M.E. Smith

A possible role of Fe(II)-oxidizing photoautotrophic bacteria in the formation of ancient Fe(III)-mineral deposits (Banded Iron Formations)
A. Kappler, L.R. Croal, D.K. Newman

Geochemistry and Evolution of Pedogenic Fe Nodules in a Marine Terrace Chronosequence
M.S. Schulz, A.F. White, D.V. Vivit

Friday

Oral Session Schedule: Carbon Dioxide and Hydrogen Sulfide Sequestration (S5)	
Program Block: Friday Session C3	
Time	**Abstract**
1:30	Geochemical monitoring of the Weyburn CO_2-injection EOR site, Saskatchewan, Canada *K. Durocher, I. Hutcheon, M. Shevalier, B. Mayer, W. Gunter, E. Perkins*
1:50	Geochemical impact assessment of CO_2 storage in the North German Basin *F. May*
2:10	Mineral alteration due to injection of CO_2, H_2S and SO_2 in deep arkosic formations *T. Xu, J.A. Apps, K. Pruess*
2:30	Investigations of dawsonite-forming reactions for geological CO_2 sequestration *P. Bénézeth, D.A. Palmer, L.M. Anovitz, D.J. Wesolowski, J.G. Blencoe*
2:50	Processed kimberlite - water interactions, Ekati diamond mine, NWT, Canada *H.A. Rollo, H.E. Jamieson*
3:10	The kinetics of hydrogen sulfide sequestration in sandstones *M. Schoonen, Y. Xu, A. Carpenter*

Sequestration Session: Abstracts presented as Posters (Wednesday-Thursday poster session)

CO_2 geological sequestration in Italy: state of the art and potential sites
F. Quattrocchi, R. Bencini, D. Cinti, G. Galli, L. Pizzino, N. Voltattorni, A. Navarra

The effect of $CO_{2(aq)}$, $Al_{(aq)}$ and temperature on feldspar dissolution
S.A. Carroll, K.G. Knauss

Coupled carbonate mineral dissolution and growth: calcite and strontianite
K.G. Knauss, C.M. Eggleston, S.R. Higgins, B. Greer

Sequestration of CO_2 in redbeds: siderite precipitation from CO_2 and SO_2 waste gas
J.L. Palandri, Y.K. Kharaka

An experiment frozen in time – cryo-SEM imaging of rapidly-formed CO_2 hydrate
C.A. Rochelle, A.E. Milodowski, K. Bateman, D.A. Gunn, P.D. Jackson, L.M. Nelder, J.G. Rees, M.A. Lovell

Preliminary experimental results of CO_2 sequestration with brine
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