**Telluride Workshop: Iron Biogeochemistry 2012**

**Chair: Thomas Borch (CSU); co-Chair: Kevin Rosso (PNNL)**

**Location**: Telluride Intermediate School
725 West Colorado

 Telluride CO 81435

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|  **Tuesday, August 07** |  | **Theme 1: Iron cycling and reactivity** |
| *12:00 -1:00* | *Group Lunch* | *TSRC Catered Lunch at Meeting site, participants only* |
|  1:00-1:15  | *Introductory remarks* |  |
| 1. 1:15-2:00  | 1: Thomas Borch | Iron reduction, precipitation and transformation: Effect of co-precipitated organic matter on Fe reactivity and structure |
|  2. 2:15-3:00 | 2: Andreas Kappler | Role of nitrite for nitrate-dependent Fe(II) oxidation and impact of humics and ferrihydrite aggregation on Fe(III) reduction |
| *Coffee break* |  |  |
|   3. 3.30-4.15 | 3. Satish Myneni | Chemistry of Colloidal Fe in Oceans & Lakes: Structure, Stability, and Influence on Productivity |
| 4. 4.30-5.15 | 4. Richard Collins | Combining thermodynamics and quick scanning EXAFS spectroscopy to examine ferric iron hydrolysis and precipitation |
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|  **Wednesday, August 08** |  | **Theme 2: Microbe-mineral interactions and extreme environments** |
| *Morning Free* |  |  |
| 5. 12:30-1:15  | 1: Alexis Templeton | Geomicrobiology of iron in extreme environments: bacteria-mineral-metal ion interactions |
| 6. 1:30-2:15 | 2: Bill Burgos | Iron biogeochemistry in acid mine drainage-impacted systems  |
| *Coffee break* |  |  |
| 7. 3:00-3:45  | 3: James Byrne | Biogenic Magnetite Nanoparticles: Development and Optimization for Potential Applications |
| 8. 4:00-4:45  | 4: Clara Chan  | Aerobic neutrophilic Fe-oxidizing microbes |
| 9. 5:00-5:45 | 5: Anke Neumann | Fe(II) driven Fe clay mineral reorganization |
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|  **Thursday, August 09** |  | **Theme 3: Electron transfer and iron oxide dynamics** |
|  *7:30-8:15*  | *TSRC Breakfast* | *TSRC Catered Breakfast at Meeting site, participants only* |
| 10. 8:15-9:00 | 1: Marc Michel | The structure and chemistry of ferrihydrite |
| 11. 9:15-10:00  | 2: Paul Tratnyek | Electrochemical perspective on Fe redox chemistry |
| *Coffee break* |  |  |
| 12. 10:45-11:30 | 3: Chris Gorski | Dynamics of electron transfer to and from Fe-bearing minerals: Electrochemical characterization of redox properties |
| *11:45-12:45* | *TRSC Lunch* | *TRSC Catered Lunch at Meeting site, participants only* |
| 13. 1:00-1:45 | 4: Michelle Scherer | Fe(II)-catalyzed electron and atom exchange in iron oxides |
| 14. 2:00-2:45 | 5. Kevin Rosso | Iron redox transformation by Fe(II): the bulk conduction mechanism |
| 15. 3:00-3:45 | 6. Brian Phillips | Rust in the magnet:  recent advances in NMR spectroscopy of ion binding on Fe-oxyhydroxides |
| 16. 4.00-4.45 | 7. Vitaly Alexandrov | Computational Modeling of Fe-bearing Redox-Active Mineral Systems |
| *Afternoon Free* |  |  |
|  *6:00 - dark* | *TSRC Picnic* | *TSRC picnic, family and friends welcome free of charge* |
|  **Friday, August 10** |  | **Theme 4: Iron induced contaminant reduction** |
|  *7:30-8:30*  | *TSRC Breakfast* | *TSRC Catered Breakfast at Meeting site, participants only* |
| 17. 8:30-9:15 | 1: Knud Dideriksen | Reduction of chromium and selenium by green rust |
| 18. 9:30-10:15 | 2: Carolyn Pearce | Fe(II) in Ti-doped ferrite spinels and contaminant reduction |
| *Coffee break* |  |  |
| 19. 11:00-11:45 | 3: Scott Fendorf | Iron reduction under diffusion limited conditions: Implications for contaminant fate and transport |
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| *BEER DOWNTOWN* |  |  |
|  |  | Conference Adjourns |

List of Confirmed Participants:

Participants and Email List:

1. Alexis Templeton (USA; alexis.templeton@colorado.edu)
2. Andreas Kappler (Germany; andreas.kappler@uni-tuebingen.de)
3. Anke Neumann (USA; anke-neumann@uiowa.edu)
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7. Clara Chan (USA; cschan@udel.edu)
8. Chris Gorski (USA/Switzerland; Christopher.Gorski@eawag.ch)
9. James Byrne (Germany; james.byrne@uni-tuebingen.de)
10. Kevin Rosso (USA; Chair; Kevin.Rosso@pnl.gov)
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12. Marc Michel (USA; mfrede2@vt.edu)
13. Michelle Scherer (USA; [michelle-scherer@uiowa.edu](file:///C%3A%5CUsers%5Cborch%5CDocuments%5C1%20CSU%5CTalks%5CTelluride%202012%5Cmichelle-scherer%40uiowa.edu))
14. Paul Tratnyek (USA; tratnyek@ebs.ogi.edu)
15. Richard Collins (Australia; [richard.collins@unsw.edu.au](file:///C%3A%5CUsers%5Cborch%5CDocuments%5C1%20CSU%5CTalks%5CTelluride%202012%5Crichard.collins%40unsw.edu.au))
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17. Scott Fendorf (USA; Fendorf@stanford.edu)
18. Vitaly Alexandrov (USA; vitali.alexandrov@pnnl.gov)
19. Thomas Borch (USA; Chair; Thomas.Borch@colostate.edu)