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BIOGRAPHY

Dr. Yuxin Wu is a Staff Scientist in the Earth & Environmental Sciences Area at Lawrence Berkeley National Laboratory. His research focuses on the application of geophysical methods to energy and environment related topics. His current research interests and topics include (1) geophysical monitoring of coupled thermo-hydro-biogeochemical processes in shallow subsurface, (2) joint application of geophysical methods for the characterization and monitoring of THMC processes related to energy production and waste storage; (3) enhanced fracture and flow imaging using multiple contrasting agents; and (4) the development of novel imaging and sensing approaches for visualizing plant root and root-soil interactions.

BACKGROUND

- Trained in applied, near surface and environmental geophysics, geochemistry and geology
- Expertise in hydro-/bio- geophysics, and joint applications of geophysical, hydrological and biogeochemical methods for multi-disciplinary research
- Development of novel geophysical approaches and their applications in ecosystem and subsurface energy and environmental studies

EDUCATION

- Ph.D. 2007. Geophysics, Rutgers University, New Jersey.
- M.S. 2002. Environmental Science/Ecology, Peking University, China.
- B.S. 1999. Geochemistry/Mineralogy/Petrology, Peking University, China.

PROFESSIONAL EXPERIENCE

- 2019 - present, Staff Scientist, Lawrence Berkeley National Lab
- 2008 – 2019, Research Scientist, Lawrence Berkeley National Lab
- 2007 –2008, Postdoctoral Research Associate, Idaho National Laboratory

HONORS & AWARDS

- 2011, Best Oral Presentation Award (lead Author D. Wellman), WM Symposia, Phoenix, AZ
- 2011, Best paper (lead Author J. Ajo Franklin), SEG 2011 Annual meeting, Las Vegas, NV
- 2005, dissertation Fellowship, Rutgers University
- 2001, Academic Excellence, Peking University
- 1999- 2002, Graduate Scholarship, Peking University
- 1995-1996, Eyas scholarship, Peking University

PROFESSIONAL ACTIVITIES

- Special issue editor – Recent developments in Induced Polarization – Near Surface Geophysics
- Society for Exploration Geophysicists, Near surface technical committee member, 2018 Anaheim meeting, 2017-2018
- AGU Hydrogeophysics Technical Committee, Member, 2017-Present
- 5th International Induced Polarization workshop, Technical committee member, 2017-2018
- 4th International Induced Polarization workshop, Technical committee member, 2015-2016
- Session chairs: AGU annual meetings (2011, 2016, 2017); AOGS (2016); SEG annual meeting (2018).
- Reviewer for 19 scientific journals including e.g. ES&T, JGR-Biogeosciences, GRL, Journal of Contaminant Hydrology, Chemosphere, Geophysical Journal International, Vadose Zone Journal, Water Resources Research, Surveys in Geophysics, Journal of Applied Geophysics, Cold Region Science & Technology, Environmental Earth Sciences, Geophysical Prospecting, etc.
- Reviewer for DOE SBIR, Netherlands organization for scientific research

PEER-REVIEWED PUBLICATIONS

1. **Wu Y.**, Perruzo L., Effects of salinity and pH on the spectral induced polarization signals of graphite particles, submitted to Geophysical Journal International
2. Woo. D., Riley W., **Wu Y.**, More Fertilizer and Impoverished Roots Required for Improving Wheat Yields and Profits under Climate Change, submitted to JGR-biogeosciences
3. Izumoto S., Huisman J., **Wu Y.**, Vereecken H., Effect of solute concentration on the spectral induced polarization response of calcite precipitation, Submitted to JGR-Biogeosciences
4. Mundhenk N., **Wu Y.**, Carrero S., Knauss K., Kinetic and thermodynamic analysis of high-temperature CO₂ corrosion of carbon steel in simulated geothermal NaCl fluids, submitted to Geothermics.
5. Wang J. and **Wu Y.**, Wellbore integrity investigation using time-domain reflectometry, Submitted to Geophysics.
6. Kessouri et al (large group), Recent developments in biogeophysics and IP, In revision for Near Surface Geophysics
7. Cheng Y., Hubbard C., Geller J., Chou C., Voltalini M., Engelbrekton A., Coates J., Conrad M., Ajo-Franklin J., **Wu Y.**, Biofilm Feedbacks Alter Hydrological Characteristics of Fractured Rock Impacting Sulfidogenesis and Treatment, Submitted to Energy & Fuels
8. Heikoop J.M., Newman B.D., Arendt C.A., Throckmorton H.M., Perkins G.B., Musa D., **Wu Y.**, Lecher A., Payton A., Graham D.E., Wilson C.J., Wullschlegel S.D., Macrotopographic controls on surface water and active layer chemistry in the arctic coastal plain of northern Alaska, USA, In revision for JGR- biogeosciences
9. Peruzzo L., Chou C., **Wu Y.**, Schmutz M., Mary B., Wagner F., Petrov P., Newman G., Blancaflor E. Liu X., Ma X., Hubbard S., Non-invasive Imaging of Plant Current Pathways and associated Root Architecture using a newly developed Electrical Current Source Density Approach, In revision.

10. Woo. D., Riley W., Blancaflor E., Mekonnen Z., **Wu Y.**, Impoverishing, Not Enriching, Roots will Improve Winter Wheat Crop Yield and Profitability, Submitted to Agricultural Systems
11. Mary B., Peruzzo L., Boaga J., Cenni N. Schmutz M., **Wu Y.**, Hubbard S., Cassiani G., Time-lapse monitoring of root water uptake using electrical resistivity tomography and Mise-à-la-Masse: a vineyard irrigation experiment, Submitted to SOIL.
12. Benjamin Mary, Luca Peruzzo, Jacopo Boaga, Myriam Schmutz, **Yuxin Wu**, Susan Hubbard, Giorgio Cassiani, 2018, Small scale characterization of vine plant root water uptake via 3D electrical resistivity tomography and Mise-a-la-Masse method, *Hydrol. Earth Syst. Sci.*, 22, 5427–5444, 2018
13. Cheng, Yiwei; **Wu, Yuxin**^{*}; Wen, Hang; Hubbard, Christopher; Engelbrektsen, Anna; Tom, Lauren; Li, Li; Piceno, Yvette; Bill, Markus ; Andersen, Gary; Coates, John; Conrad, Mark; Ajo-Franklin, Jonathan, 2018, Microbial Sulfate Reduction and Perchlorate Inhibition in a Novel Mesoscale Tank Experiment, *Energy & Fuels*, **DOI:** 10.1021/acs.energyfuels.8b01802
14. Peruzzo L., Schmutz M., Franceschi M., **Wu Y.**, Hubbard S.S., 2018, The Relative Importance of Saturated Silica Sand Interfacial and Pore Fluid Geochemistry on the Spectral Induced Polarization Response, *JGR-Biogeosciences*, 123, 1702–1718. <https://doi.org/10.1029/2017JG004364>.
15. **Wu Y.**, Ulrich C., Kneafsey T., Lopez R., Chou C., Geller J., McKnight K., Dafflon B., Soom F., Peterson J., Hubbard S.S., 2018, Depth – resolved physicochemical characteristics of active layer and permafrost soils in an arctic polygonal tundra region, *JGR – biogeosciences*, 123, 1366–1386. <https://doi.org/10.1002/2018JG004413>
16. Tas N., Prestat E., Wang S., **Wu Y.**, Ulrich C., Kneafsey T., Tringe S.G., Torn M., Hubbard S.S., Jansson J.K., 2018, Landscape topography structures the soil microbiome in arctic polygonal tundra, *Nature Communications*, 9:777, doi:10.1038/s41467-018-03089-z
17. **Wu Y.**, Cheng Y., Hubbard C.G., Hubbard S.S., Ajo-Franklin J.B., 2018, Biogenic sulfide control by nitrate and (per)chlorate – A monitoring and modeling investigation, *Chemical Geology*, 476 , p 180-190, <https://doi.org/10.1016/j.chemgeo.2017.11.016>
18. **Wu Y.**, Nakagawa S., Kneafsey T.J., Dafflon B., Hubbard S.S., 2017, Electrical and seismic response of saline permafrost soil during freeze – thaw transition, *Journal of Applied Geophysics*, 146 , p 16-26, <http://dx.doi.org/10.1016/j.jappgeo.2017.08.008>
19. Leroy P., Li S., Jougnot D., Revil A., **Wu Y.**, 2017, Modelling the evolution of complex conductivity during calcite precipitation on glass beads, *Geophysical Journal International*, 209 (1), 123-140, <https://doi.org/10.1093/gji/ggx001>
20. Raz-Yaseef N., Torn M.S., **Wu Y.**, Billesbach D.P., Liljedahl A.K., Kneafsey T.J., Romanovsky V.E., Cook D.R., Wullschleger S.D., 2016, Large CO₂ and CH₄ emissions from polygonal tundra during spring thaw in northern Alaska, *Geophysical Research Letters*, 44, 504–513, doi:10.1002/2016GL071220.
21. Dafflon B., Hubbard S.S., Ulrich C., Peterson J. E., **Wu Y.**, Wainwright H. and Kneafsey T., 2016, Geophysical estimation of shallow permafrost distribution and properties in an ice-wedge polygon-dominated Arctic tundra region, *Geophysics*, 81(1), WA247-WA263, <https://doi.org/10.1190/geo2015-0175.1>

22. Liu L., Wang X., Lajeunesse M.J., Miao G., Piao S., Wan S., **Wu Y.**, Wang Z., Yang S., Li P., Deng M., 2016, A cross-biome synthesis of soil respiration and its determinants under stimulated precipitation changes, *Global Change Biology*, 22, 1394-1405, doi: 10.1111/gcb.13156
23. Commer M., Doetsch J., Dafflon B., **Wu Y.**, Daley T.M., Hubbard S.S., 2016, Time-lapse 3-D electrical resistance tomography inversion for crosswell monitoring of dissolved and supercritical CO₂ flow at two field sites: Escatawpa and Cranfield, Mississippi, USA, *International Journal of Greenhouse Gas Control*, 49, 297-311, <http://dx.doi.org/10.1016/j.ijggc.2016.03.020>
24. Shi Z., Fan D., Johnson R.L., Tratnyek P.G., Nurmi J.T., **Wu Y.**, Williams K.H., 2015, Methods for Characterizing the Fate and Effects of Nano Zerovalent Iron during Groundwater Remediation, *Journal of Contaminant Hydrology*, 181, p 17-35, <https://doi.org/10.1016/j.jconhyd.2015.03.004>
25. Wainwright H.M., Dafflon B., Smith L.J., Hahn M.S., Curtis J.B., **Wu Y.**, Ulrich C., Peterson J.E., Torn M.S. and Hubbard S.S., 2015, Identifying multiscale zonation and assessing the relative importance of polygon geomorphology on carbon fluxes in an Arctic Tundra Ecosystem, *JGR – biogeosciences*, 120, 788–808, doi:10.1002/2014JG002799..
26. Newman, B.D., Throckmorton, H.M., Graham, D.E., Gu, B., Hubbard, S.S., Liang, L., **Wu, Y.**, Heikoop, J.M., Herndon, E.M., Phelps, T.J., Wilson, C.J., Wullschleger, S.D., 2015, Microtopographic and depth controls on active layer chemistry in Arctic polygonal ground, *Geophysical Research Letters*, 42, 1808 - 1817, doi:10.1002/2014GL062804.
27. Trautz, R.C., Pugh, J.D., Varadharajan, C., Zheng, L., Bianchi, M., Nico, Peter, Spycher, N., Newell, D.L., Esposito, R., **Wu, Y.**, Dafflon, B., Hubbard, S.S., Birkholzer, Jens., Effect of dissolved CO₂ on a shallow groundwater system: A controlled release field experiment, *Environ. Sci. Technol.* 2013, 47, 298–305, 2013. , <dx.doi.org/10.1021/es301280t>
28. **Wu, Y.**, Surasani, V.K., Li, L., Hubbard, S.S., Geophysical monitoring and reactive transport simulations of bioclogging processes induced by *Leuconostoc mesenteroides*, *Geophysics*, Vol. 79, No. 1. doi: 10.1190/GEO2013-0121.1
29. Surasani, V.K., Li, L., Ajo-Franklin, J., Hubbard, C.G., Hubbard, S.S., **Wu, Y.**, Selective bioclogging and permeability alteration by *L. mesenteroides*: Bioclogging and Permeability Alteration by *L. mesenteroides* in a Sandstone Reservoir: A Reactive Transport Modeling Study , *Energy and Fuels*, doi: 10.1021/ef401446f, 2013
30. Revil, A., **Wu, Y.**, Karaoulis, M., Hubbard, S.S., Watson, D.B., Eppehimer, J.D., 2013, Geochemical and geophysical responses during the infiltration of fresh water into the contaminated saprolite of the Oakridge Integrated Field Research Challenge site, *Water Resources Research* doi: 10.1002/wrcr.20380
31. Revil, A., Skold, M., Hubbard, S.S., **Wu, Y.**, Watson, D., Karaoulis, M., Petrophysical properties of saprolites from the Oak Ridge Integrated Field Research Challenge site, Tennessee, *Geophysics*, VOL. 78, NO. 1, P. D21–D40, 17, 10.1190/GEO2012-0176.1.
32. Dafflon, B., **Wu, Y.**, Hubbard, S.S., Birkholzer, J., Thomas, D., Pugh, J., Peterson, J., Trautz, B., Monitoring CO₂ transition and associated geochemical transformations in a shallow groundwater system using complex electrical methods, *Environmental Science and Technology*, doi: 10.1021/es301260e, 2012.

33. **Wu, Y.**, Hubbard, S.S., Wellman, D., Geophysical monitoring of foam based remediation methods for metals and radionuclides in the deep vadose zone, *Vadose Zone Journal*, DOI:10.2136/VZJ2011.0160, 2012.
34. **Wu, Y.**, Hubbard, S.S., K.H. Williams, and J. Ajo-Franklin, On the complex conductivity signatures of calcite precipitation, *JGR-Biosciences*, 2010
35. **Wu, Y.**, Hubbard, S.S., C. Ulrich, S. Wullschleger, Remote monitoring of freeze-thaw transitions in Arctic Soils using using the Complex Resistivity Method, *Vadose zone Journal*, doi: 10.2136/vzj2012.0062, 2012.
36. Hubbard, S.S., Gangodagamage, C., Dafflon, B., Wainwright, H., Ulrich, C., Gusmeroli, A., **Wu, Y.**, Doetsch, J., Peterson, J.E., Wilson, C., Tweedie, C., Wullschleger, S.D., Quantifying and relating subsurface and land-surface variability in permafrost environments using surface geophysical and LIDAR datasets, *Hydrogeology Journal*, 21 (1), p 149-169.
37. **Wu, Y.**, J.B. Ajo-Franklin, N. Spycher, S.S. Hubbard, G. Zhang, K.H. Williams, J. Taylor, Y. Fujita, and R. Smith (2011), Geophysical monitoring and reactive transport modeling of ureolytically-driven calcium carbonate precipitation. *Geochemical Transactions*, 12 (7); DOI: 10.1186/1467-4866-12-7. LBNL-5149E
38. **Wu, Y.**, S.S. Hubbard and D. Wellman (2012), Geophysical Monitoring of Foam used to Deliver Remediation Treatments within the Vadose Zone, *Vadose Zone Journal*, 2012, 11 (4), vzj2011.0160.
39. **Wu, Y.**, Versteeg, R., Slater, L. and LaBrecque, D., 2009, Calcite precipitation dominates the electrical signatures of zero valent iron columns under simulated field conditions, *Journal of contaminant hydrology*, Volume 106: 131-143.
40. **Wu, Y.**, Slater, L., Versteeg, R. and LaBrecque, D., 2008, A comparison of the low frequency electrical signatures of iron oxide versus calcite precipitation in granular zero valent iron columns, *Journal of Contaminant Hydrology*, volume 95 (3-4): 154-167.
41. **Wu, Y.**, Slater, L. and Korte, N., 2006, Low frequency electrical properties of corroded iron barrier cores, *Environmental Science & Technology*, 40 (7): 2254-2261
42. **Wu, Y.**, Slater, L., Korte, N., 2005, Effect of precipitation on low frequency electrical properties of zero valent iron columns, *Environmental Science & Technology*, 39 (23): 9197-9204.
43. Slater, L., Choi, J., **Wu, Y.**, 2005, Electrical Properties of Iron-sand Columns: Implications for induced polarization investigation and Performance Monitoring of Iron-wall Barriers, *Geophysics*, 70, 4, G87-G94.
44. Song, Y., Zheng, G., Han, Y., **Wu, Y.**, 2002, Environmental information from an archaeological site at Erlitou, Yanshi, Henan Province, *Archaeology*, Vol 12
45. Wei C., **Wu Y.**, Y. Ni, B. Chen and S. Wang, 1999, Characteristics and Geological significance of the Eclogites from the Tongbai Mountains, Henan Province, *Chinese Science Bulletin*, Vol 44, No. 22, P2076-2079.

BOOK CHAPTERS/EXTENDED ABSTRACTS

1. Wang J., **Wu Y.**, Wellbore integrity investigation using time-domain reflectometry, Accepted for SEG 2019.
2. **Wu Y.**, Wang J., Wilt M., Um E., Weiss C., Vasco D., Wellhead-based casing integrity assessment and monitoring, accepted at Geothermal Research Council 2019 meeting.
3. Wang J., **Wu Y.**, Vasco D., Wellbore integrity investigation using seismic tube-wave and time-domain reflectometry: Laboratory modeling, SEG 2018 meeting, Anaheim CA.

4. Peruzzo L., **Wu Y.** et al, Geoelectric investigation of the root-soil interface, extended abstract, SEG 2018 meeting, Anaheim CA.
5. Wilt M. Um E., Weiss C., Vasco D. Petrov P., Newman G. **Wu Y.**, Wellbore integrity assessment with casing based advance sensing, Proceedings, 43rd Workshop on Geothermal Reservoir Engineering.
6. Varadharajan C., Tinnacher R.M., Zheng L., Dafflon B., **Wu Y.**, Reagan M.T., Birkholzer J., Trautz R., Carey J.W. A review of studies examining the potential for groundwater contamination from CO₂ sequestration. AGU Monograph on Caprock integrity, Wiley Blackwell, in press.
7. Trautz, R.C. Pugh, J.D. Zheng, L., Spycher, N.F., Nico, P.S., Varadharajan, C., Dafflon, B., **Wu, Y.**, Newell, D.L., Esposito, R.A., Hubbard, S.S., Birkholzer, J.T., Tinnacher, R.M., Bianchi, M., Evaluation of dissolved CO₂-induced metals mobilization in groundwater using a controlled release experiment. Energy Procedia, 2013
8. Wainwright, H.M., Hubbard, S.S., Dafflon, B., Ulrich, C., **Wu, Y.**, Gangodagamage, C., Rowland, J., Wilson, C., Tweedie, C., Wullschleger, S.D., Multiscale bayesian fusion approach using geophysical and remote sensing data for characterizing arctic tundra hydrogeochemical properties, TICOP 2012.
9. Ajo-Franklin, J.B., T.M. Daley, B. Butler-Veytia, J. Peterson, **Y. Wu**, B. Kelley, and S. Hubbard (2011), "Multi-level continuous active source seismic monitoring (ML-CASSM): Mapping shallow hydrofracture evolution at a TCE contaminated site," Society of Exploration Geophysicists Annual Meeting 2011, [Selected as Best Paper from Conference]
10. Nico, P. S., Ajo-Franklin, J. B., Benson S. M., MacDowell, A., Silin, D. B., Tomutsa, L. and **Wu, Y.** Synchrotron X-ray Micro-Tomography and Geological CO₂ Sequestration. In Advances in Computed Tomography for Geomaterials, GeoX 2010. Ed. Khalid. A. Alshibi and Allen H. Reed. Wiley, & Sons, Hoboken, NJ, p. 374-380, 2010, [Book Chapter]

SELECTED ABSTRACTS

- **Wu, Y.** B. Dafflon, S. Hubbard, J. Peterson, J. Pugh, T. Daley, R. Trautz, J. Birkholzer, 2012, *Complex electrical method as a monitoring tool for CO₂ intrusion into shallow groundwater systems and associated geochemical transformations*, 11th Annual Conference on Carbon Capture Utilization & Sequestration April 30 - May 3, 2012 Pittsburgh, Pennsylvania
- Hubbard, S., J. Ajo-Franklin; B. Butler-Veytia; **Y. Wu**; E. Gasperikova; J. Peterson; and R. Kelley, 2012, *Geophysical Imaging for Investigating the Distribution of Induced Fractures and associated Amendments at the F. E. Warren Air Force Base*, the Eighth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 21-24, Monterey, CA
- Trautz, R., L. Zheng, **Y. Wu**, C. Varadharajan, N. Spycher, J. Pugh, P. Nico, D. Newell, S. Hubbard, R. Esposito, B. Dafflon, J. Birkholzer, M. Biachi, 2012, *Evaluation of Dissolved CO₂-Induced Metals Mobilization in Groundwater Using a Controlled Release Experiment*, International Conference on Greenhouse Gas Technologies (GHGT-11), 18th-22nd November 2012, Kyoto International Conference Center, Japan

- J. Pugh, M. Bianchi, J. Birkholzer, B. Dafflon, T. Daley, K. Ellison, R. Esposito, S. Hubbard, D. Newell, P. Nico, D. Patel, J. Peterson, N. Spycher, R. Trautz, C. Varadharajan, **Y. Wu**, L. Zheng, 2012, *Assessing the Impact of Elevated Dissolved Carbon Dioxide on Aquifer Water Quality through a Controlled Release Field Test: Test Design and Implementation*, 11th Annual Conference on Carbon Capture Utilization & Sequestration April 30 - May 3, 2012 Pittsburgh, Pennsylvania
- Ajo-Franklin, J.; T. Daley; B. Butler-Veytia; J. Peterson; E. Gasperikova; **Y. Wu**; B. Kelly and S. Hubbard, 2011, *The acquisition and integrated inversion of a continuous active source seismic monitoring dataset: application to shallow hydrofracture evolution (Invited)*, AGU 2011 fall meeting abstract H52C-03
- Wellman DM, SV Mattigod, SS Hubbard, AL Miracle, FA Tilton, L Zhong, M Foote, **Y Wu**, and DP Jansik. 2011. "Advanced Remedial Methods for Metals and Radionuclides in Vadose Zone Environments." Presented by DM Wellman at Waste Management. PNNL-SA-78013.
- Robert L. Kelley; Susan Hubbard, Jonathan Ajo-Franklin; Belinda Butler-Veytia; **Yuxin Wu**; John E. Peterson; and Erika Gasperikova, 2011, Geophysical Imaging for Investigating the Distribution of Induced Fractures and associated Amendments at the F. E. Warren Air Force Base, DOD- ESTCP 2011 Symposium & Workshop
- Dafflon, B; **Y. Wu**; S. Hubbard; J. Birkholzer; T. Daley; J. Pugh; J. Peterson; R. Trautz, *Evaluating sensitivity of complex electrical methods for monitoring CO₂ intrusion into a shallow groundwater system and associated geochemical transformations*, AGU 2011 fall meeting abstract GC41E-02.
- Johnson TC, DM Wellman, S Hubbard, and **Y Wu**. 2011. "Deep Vadose Zone Applied Field Research Initiative: Development of Geophysical Monitoring Techniques for Foam Amendment Delivery." Presented by DM Wellman (Invited Speaker) at Deep Vadose Zone AFRI Kickoff Meeting, Richland, Washington, April 22, 2011. PNNL-SA-79927.
- Trautz, R.C., Birkholzer, J.T., Esposito, R., Hubbard, S., Nico, P., Pugh, J., Spycher, N., Varadharajan, C., **Wu, Y.**, Zheng, L. (2011): *An Integrated Field Experiment for Measuring Dissolved CO₂-Induced Metals Mobilization in Groundwater*, Abstract in *Proceedings 10th Annual Conference on Carbon Capture and Sequestration*, Pittsburgh, PA, May 2-5, 2011.
- Johnson TC, MJ Truex, DM Wellman, MD Freshley, S Hubbard, **Y Wu**, BL Charboneau, JG Morse, MH Doornbos, and GB Chronister. 2011. "Deep Vadose Zone-Applied Field research Initiative: In Situ Characterization and Monitoring." Presented by TC Johnson (Invited Speaker) at DOE-EM TEG Review, Richland, Washington, June 27, 2011. PNNL-SA-81319.
- Jansik DP, DM Wellman, SV Mattigod, JD Istok, L Zhong, **Y Wu**, M Berry, J Teeter, M Foote, ZF Zhang, and S Hubbard. 2011. "Foam: Novel Delivery Technology for Remediation of Vadose Zone Environments." Presented by Paul Dixon at ICEM 2011, Reims, France on September 26, 2011. PNNL-SA-82836.
- Skold, M.; S. Hubbard; M. Karaoulis; A. Revil; N. Spycher; D. Watson; **Y. Wu**, *Coupled Interpretation of Geoelectrical Surveying Results in Environmental Site Investigations*, AGU 2011, fall meeting abstract H34B-03.

- Varadharajan, C., Nico, P., Pugh, J., Zheng, L., **Wu, Y.**, Spycher, N., Birkholzer, J.T., Hubbard, S., Trautz, R.C. (2011): *Evaluating the Effects of CO₂ Intrusion on Trace Metal Mobility in Groundwaters*, Abstract in *Proceedings 10th Annual Conference on Carbon Capture and Sequestration*, Pittsburgh, PA, May 2-5, 2011.
- Istok, J.; D. Jansik; M. Foote; Z.F. Zhang; **Y. Wu**; S. Hubbard; S. Mattigod; L. Zhong; D. Wellman, *Foam-based delivery of amendments to immobilize metals and radionuclides in deep vadose zone environments (Invited)*, AGU 2011, fall meeting abstract, H24A-03.
- **Wu, Y.**, C. G. Hubbard, W. Dong and S.S. Hubbard, *Complex electrical monitoring of biopolymer and iron mineral precipitation for microbial enhanced hydrocarbon recovery*, AGU 2011, fall meeting abstract B23D-06
- Wu, Y., Ajo-Franklin, J., Armstrong, R., and Hubbard S.S., 2010, Noninvasive Geophysical Imaging of Ureolytic CaCO₃ Precipitation, Goldschmidt 2010 Conference, Knoxville, TN, June 13-18, 2010.
- Wellman DM, SV Mattigod, L Zhong, M Foote, S Hubbard, **Y Wu**, AL Miracle, ZF Zhang, and DP Jansik. 2010. “*Advanced Remedial Methods for Metals and Radionuclides in Deep Vadose Zone Environments.*” In International Conference on Environmental Remediation and Waste Management, PNNL-SA-73089, Pacific Northwest National Laboratory, Richland, Washington
- Wellman, D., S. Mattigod, S. Hubbard, A. Miracle, L. Zhong, M. Foote and **Y. Wu**, *Advanced remedial methods for metals and radionuclides in vadose zone environments*, *International Conference on Environmental Remediation and Radioactive Waste Management*, Tsukuba, Japan Oct 3-7, 2010
- **Wu, Y.**; Hubbard, S. S.; Ajo-Franklin, J. B.; Williams, K. H., *Pore fluid chemistry and spectral induced polarization signatures of calcium carbonate*, American Geophysical Union, Fall Meeting 2010, abstract #NS33A-06
- Wellman DM, SV Mattigod, L Zhong, M Foote, SS Hubbard, **Y Wu**, AL Miracle, and ZF Zhang. 2010. “*Advanced Remedial Methods for Metals and Radionuclides in Deep Vadose Zone Environments.*” Abstract submitted to Waste Management, Phoenix, Arizona. PNNL-SA-73788
- Ntarlagiannis, D.; Slater, L. D.; Williams, K. H.; Hubbard, S. S.; **Wu, Y.**, *Investigating the effect of electro-active ion concentration on spectral induced polarization signatures arising from biomineralization pathways*, American Geophysical Union, Fall Meeting 2010, abstract #NS31B-1401
- **Wu, Y.**, Ajo-Franklin, J., R. Armstrong and S. Hubbard, *Noninvasive Geophysical Imaging of Ureolytic CaCO₃ Precipitation*, *Geochim Cosmochim Acta* 74, A1149, 2010.
- Wellman DM, DP Jansik, SV Mattigod, L Zhong, **Y Wu**, MW Foote, ZF Zhang, and S Hubbard, 2010. “*Foam – Novel Delivery Technology for Remediation of Vadose Zone Environments.*” Abstract submitted to ICEM 2011, Reims, France. PNNL-SA-76887.
- Ntarlagiannis, D., K. Williams, L. Slater, S. Hubbard, and **Y. Wu**, *Investigating the effect of electroactive ion concentration on induced polarization signatures arising from biomineral formation*, *Geochim Cosmochim Acta* 74, A767, 2010
- Baker, G.S., **Y. Wu**, S.S. Hubbard, W. Wu, D. Pl Gaines, J. Pratt, A. Modi, D. Watson and P. Jardine, *Surface time-lapse electrical resistivity tomography (TLERT) monitoring of an SRS injection and associated biogeochemical processes*, Oak Ridge National Laboratory, Tennessee USA *Eos. Trans., AGU*, 89(53), Fall Meet. Suppl., Abstract H12A-03, 2009.

- **Wu, Y.**, S.S. Hubbard, K.H. Williams, J.B. Ajo-Franklin, *Complex conductivity signatures of CaCO₃ precipitation*, 2009 AGU fall meeting, H43C-1042
- Hubbard, S.S., **Y. Wu**; J. Chen; J. B. Ajo Franklin; L. Li; C. Tuglus; K. H Williams, 2009. *Assessing Feedbacks between Remediation-Induced Biogeochemical Transformations and Flow Characteristics using Multi-Scale Geophysical Approaches (Invited)*, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H53J-02.
- Spycher N., Weathers T., Barkouki T., Smith R., Ginn T., Zhang G., Fujita Y., **Wu Y.**, Ajo-Franklin J., Hubbard S., Sengor S., 2009. *Remediation of ⁹⁰Sr by induced calcite precipitation: reactive transport modeling on several fronts*. 237th ACS National Meeting & Exposition March 22-26, 2009, Salt Lake City, UT., Abstract no. 1247875. (poster)
- Spycher N., Zhang G., Sengor S., Issarangkun M., Barkouki T., Ginn T., **Wu Y.**, Smith R., Hubbard S., Fujita Y., Sani R., and Peyton B., 2009. *Application of TOUGHREACT V2.0 to environmental systems*. Proceedings, TOUGH Symposium 2009, Lawrence Berkeley National Laboratory, Berkeley, California, September 14-16, 2009. (extended abstract)
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