Green rust articles (key and from the consortium marked with *)

Stability, structure, formation and transformation

Hansen et (1989) Composition, stabilization, and light absorption of Fe(II)Fe(III) hydroxy-carbonate ('green rust'). Clay Minerals 24, 663-669
http://www.minersoc.org/pages/Archive-CM/Volume_24/24-4-663.pdf

Hansen et al. (1994) Evaluation of the free energy of formation of Fe(II)-Fe(III) hydroxide-sulphate (green rust) and its reduction of nitrite. Geochimica et Cosmochimica Acta 58, 2599-2608
http://www.sciencedirect.com/science/article/pii/0016703794901317

Drissi et al. (1995) The preparation and thermodynamic properties of Fe(II)-Fe(III) hydroxide-carbonate (green-rust-1) - Pourbaix diagram of iron in carbonate-containing aqueous-media. Corrosion Sicence 37, 2025-2041
http://www.sciencedirect.com/science/article/pii/0010938X95000963

Refait and Genin (1993) The oxidation of ferrous hydroxide in chloride-containing aqueous-media and pourbaix diagrams of green rust one. Corrosion Science 34, 797-819
http://www.sciencedirect.com/science/article/pii/0010938X9390101L

Refait et al. (1999) Chemical composition and Gibbs standard free energy of formation of Fe(II)-Fe(III) hydroxysulphate green rust and Fe(II) hydroxide. Clay Minerals 34, 499-510
http://claymin.geoscienceworld.org/content/34/3/499

Simon et al. (2003) Structure of the Fe(II-III) layered double hydroxysulphate green rust two from Rietveld analysis. Solid State Sciences 5, 327-334.
http://www.sciencedirect.com/science/article/pii/S1293255802000195

*Ahmed et al. (2008) Formation of hydroxysulphate and hydroxycarbonate green rusts in the presence of zinc using time-resolved in situ Small and Wide Angle X-ray Scattering. Mineralogical Magazine 72, 159-162
http://minmag.geoscienceworld.org/content/72/1/159

*Sumoondu et al. (2008) Green rust a precursor for magnetite: an in situ synchrotron based study. Mineralogical Magazine 72, 201-204
http://minmag.geoscienceworld.org/content/72/1/201

*Christiansen et al. (2009) Composition and structure of an iron-bearing, layered double hydroxide (LDH) - Green rust sodium sulphate. Geochimica et Cosmochimica Acta 73, 3579-3592.
http://www.sciencedirect.com/science/article/pii/S0016703709001914

*Davesne E. et al. (2010) Free energy of formation for green rust sodium sulphate (NaFeII6FeIII3(OH)18(SO4)2(s)). Geochimica et Cosmochimica Acta 74, 6451-6467 http://www.sciencedirect.com/science/article/pii/S0016703710004631

Ahmed et al. (2010) Formation of Green Rust Sulfate: A Combined in Situ Time-Resolved X-ray Scattering and Electrochemical Study. Langmuir 26, 6593-6603 http://pubs.acs.org/doi/abs/10.1021/la903935j

*Christiansen et al. (2014) Incorporation of Monovalent Cations in Sulfate Green Rust. Inorganic Chemistry 53, 8887-8894. http://pubs.acs.org/doi/abs/10.1021/ic500495a

Ruby et al. (2010) Synthesis and transformation of iron-based layered double hydroxides. Applied Clay Science 48, 195-202 http://www.sciencedirect.com/science/article/pii/S0169131709003135

Ruby et al. (2010) Oxidation modes and thermodynamics of FeII–III oxyhydroxycarbonate green rust: Dissolution–precipitation versus in situ deprotonation. Geochimica et Cosmochimica Acta 74, 953-966 http://www.sciencedirect.com/science/article/pii/S0016703709006693

Crystal Growth

Gilbaud et al. (2013) Surface charge and growth of sulphate and carbonate green rust in aqueous media. Geochimica et Cosmochimica Acta 108, 141-153 http://www.sciencedirect.com/science/article/pii/S0016703713000392

Johnson et al (2015) Polycrystallinity of green rust minerals and their synthetic analogs: Implications for particle formation and reactivity in complex systems. American Mineralogist 100, 2091-2105 http://ammin.geoscienceworld.org/content/100/10/2091

Occurrence in nature

Trolard et al. (2007) fougerite, a new mineral of the pyroaurite-iowaite group: Description and crystal structure. Clays and Clay Minerals 55, 323-334 http://ccm.geoscienceworld.org/content/55/3/323

and a critical comment on the above publication
*Christiansen et al. (2011) On Fougerite. Clays and Clay Minerals. 59, 3-9 http://ccm.geoscienceworld.org/content/59/1/3

*Christiansen et al (2009) Identification of green rust in groundwater. Environmental Science and Technology 43, 3436-3441 http://pubs.acs.org/doi/abs/10.1021/es8011047

*Zegeye et al. (2012) Green rust formation controls nutrient availability in a ferruginous water column. Geology 40, 599.602.
http://geology.gsapubs.org/content/40/7/599.abstract

Formation during bacterial iron reduction

Fredrickson et al. (1998) Biogenic iron mineralization accompanying the dissimilatory reduction of hydrous ferric oxide by a groundwater bacterium. GCA, 62, 3239-3257
http://www.sciencedirect.com/science/article/pii/S0016703798002439

Chauduri et al. (2001) Biogenic Magnetite Formation through Anaerobic Biooxidation of Fe(II). Applied Environmental Microbilology 67, 2844-2848
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC92949/

Hansel et al. (2003) Secondary mineralization pathways induced by dissimilatory iron reduction of ferrihydrite under advective flow. GCA, 67, 2977–2992
http://www.sciencedirect.com/science/article/pii/S001670370300276X

Redox reaction and interaction with trace components

Hansen et al. (1996) Abiotic nitrate reduction to ammonium: Key role of green rust. Environmental Science and Technology, 30, 2053-2056
http://pubs.acs.org/doi/abs/10.1021/es950844w

Myneni et al. (1997) Abiotic selenium redox transformations in the presence of Fe(II,III) oxides. Science, 278, 1106-1109.
http://science.sciencemag.org/content/278/5340/1106

Erbs et al. (1999) Reductive Dechlorination of Carbon Tetrachloride Using Iron(II) Iron(III) Hydroxide Sulfate (Green Rust). Environmental Science and Technology 33, 307-311
http://pubs.acs.org/doi/full/10.1021/es980221t

Hansen et al. (2001) Kinetics of nitrate reduction by green rusts - effects of interlayer anion and Fe(II): Fe(III) ratio. Applied Clay Science 18, 81-91
http://www.sciencedirect.com/science/article/pii/S0169131700000296

Williams and Scherer (2001) Kinetics of Cr(VI) reduction by carbonate green rust. Environmental Science and Technology 35, 3488-3494
http://pubs.acs.org/doi/abs/10.1021/es010579g

Randall et al. (2001) Sorption of As(V) on green rust ($Fe_4(II)Fe_2(III)(OH)_{12}SO_4 \cdot 3H_2O$) and lepidocrocite (γ-FeOOH): Surface complexes from EXAFS spectroscopy. Geochimica et Cosmochimica Acta 65, 1015-1023
http://www.sciencedirect.com/science/article/pii/S0016703700005937

O'Loughlin et al. (2003) Reduction of Uranium(VI) by mixed iron(II/iron(III) hydroxide (green rust): Formation of UO_2 nanoparticles. Environmental Science and Technology, 37, 721-727
http://pubs.acs.org/doi/abs/10.1021/es0208409

O'Loughlin et al. (2003) Reduction of AgI, AuIII, CuII, and HgII by FeII/FeIII hydroxysulfate green rust. Chemosphere 53, 437-446
http://www.sciencedirect.com/science/article/pii/S0045653503005459

O'Loughlin et al. (2003) Effects of AgI, AuIII, and CuII on the Reductive Dechlorination of Carbon Tetrachloride by Green Rust. Environmental Science and Technology 37, 2905-2912
http://pubs.acs.org/doi/abs/10.1021/es030304w

Bond and Fendorf (2003) Kinetics and Structural Constraints of Chromate Reduction by Green Rusts. Environmental Science and Technology 37, 2750-2757
http://pubs.acs.org/doi/abs/10.1021/es026341p

O'Loughlin et al. (2004) Reduction of halogenated ethanes by green rust. Environmental Toxicology and Chemistry 23, 41-48
http://onlinelibrary.wiley.com/doi/10.1897/03-45/abstract

Elsner et al., (2004) Reactivity of Fe(II)-bearing minerals toward reductive transformation of organic contaminants. Environmental Science and Technology, 38, 799-807
http://pubs.acs.org/doi/abs/10.1021/es0345569

*Skovbjerg et al. (2006) The mechanisms of reduction of hexavalent chromium by green rust sodium sulphate: Formation of Cr-goethite. Geochimica et Cosmochimica Acta 70, 3582-3592.
http://www.sciencedirect.com/science/article/pii/S0016703706001037

Jönsson and Sherman (2008) Sorption of As(III) and As(V) to siderite, green rust (fougerite) and magnetite: Implications for arsenic release in anoxic groundwaters. Chemical Geology 255, 173-181
http://www.sciencedirect.com/science/article/pii/S0009254108002568

*Nedel et al. (2010) Uptake and release of cerium during Fe-oxide formation and transformation in Fe(II) solutions. Environmental Science and Technology 44, 4493-4498
http://pubs.acs.org/doi/abs/10.1021/es9031503

*Christiansen et al. (2011) Neptunyl (NpO_2^+) interaction with green rust, $GR_{Na,SO4}$. Geochimica et Cosmochimica Acta 75, 1216-1226
http://www.sciencedirect.com/science/article/pii/S0016703710006654

Zegeye et al. (2014) Origin of the Differential Nanoscale Reactivity of Biologically and Chemically Formed Green Rust Crystals Investigated by Chemical Force Spectroscopy. Journal of Physical Chemistry C 118, 5978-5087
http://pubs.acs.org/doi/abs/10.1021/jp500462r

Reactive Iron Barriers and Corrosion

Roh et al. (2000) Characterization of corrosion products in the permeable reactive barriers. Envirnmental Geology 40, 184-194
http://link.springer.com/article/10.1007%2Fs002540000178

Furukawa et al. (2002) Formation of ferrihydrite and associated iron corrosion products in permeable reactive barriers of zero-valent iron ES&T, 36, 5469-5475
http://pubs.acs.org/doi/abs/10.1021/es025533h

Refait et al (2003) Formation of the Fe(II)–Fe(III) hydroxysulphate green rust during marine corrosion of steel. Corrosion Science 45, 833-845
http://www.sciencedirect.com/science/article/pii/S0010938X02001841

Isotopes

Johnson and Bullen (2003) Selenium isotope fractionation during reduction by Fe(II)-Fe(III) hydroxide-sulfate (green rust). Geochimica et Cosmochimica Acta 57, 413-419
http://www.sciencedirect.com/science/article/pii/S0016703702011377

Wiesli et al. (2004) Experimental determination of Fe isotope fractionation between aqueous Fe(II), siderite and “green rust” in abiotic systems. Chemical Geology 211, 343-362
http://www.sciencedirect.com/science/article/pii/S0009254104002505

*Døssing et al. (2011) Reduction of hexavalent chromium by ferrous iron: A process of chromium isotope fractionation and its relevance to natural environments. Chemical Geology 285, 157–166
http://www.sciencedirect.com/science/article/pii/S0009254111001641

Stylo et al. (2011) Uranium isotopes fingerprint biotic reduction. PNAS 112, 5619-5624
http://www.pnas.org/content/112/18/5619.full