

# Iron compounds in anaerobic degradation of petroleum hydrocarbons: a review



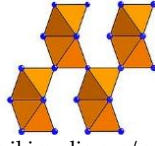

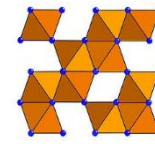

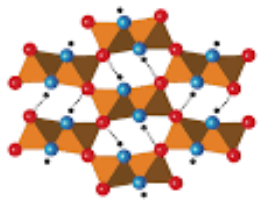
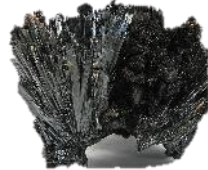
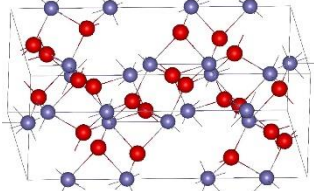

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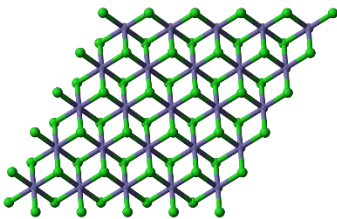

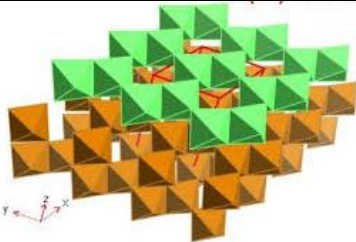

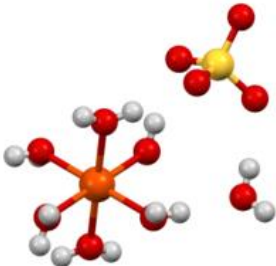

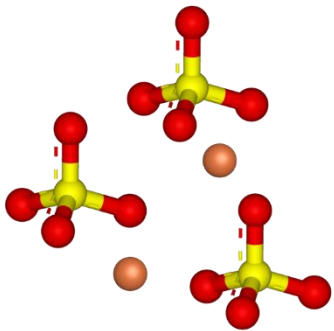

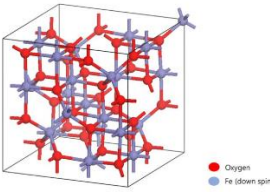

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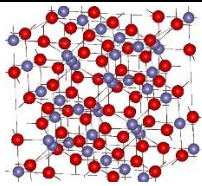

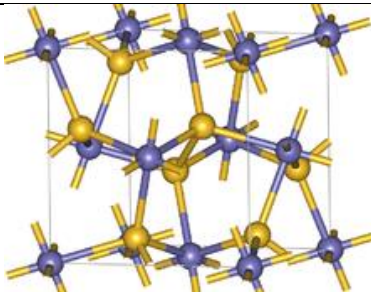

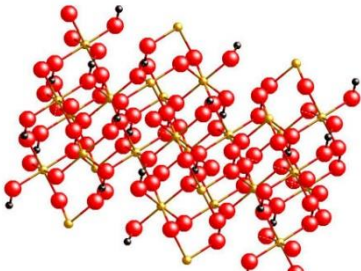

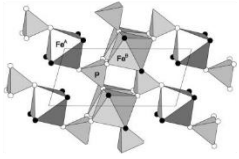

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**Table S1.** Chemical formula, structure and aspect of various iron compounds

Iron compounds	Chemical formula	Crystal structure	Appearance
Akaganeite	$\beta$ -FeOOH	 <a href="https://som.web.cmu.edu/structures2/S092-Akaganeite.html">https://som.web.cmu.edu/structures2/S092-Akaganeite.html</a>	 <a href="https://assignmentpoint.com/akaganeite-properties-and-occurrence/">https://assignmentpoint.com/akaganeite-properties-and-occurrence/</a>
Feroxyhyte	$\delta$ -FeOOH	 <a href="https://commons.wikimedia.org/wiki/File:Structure_ferrihydrite.jpg">https://commons.wikimedia.org/wiki/File:Structure_ferrihydrite.jpg</a>	 <a href="http://www.msrblog.com/science/geographic-minerals/feroxyhyte.html">http://www.msrblog.com/science/geographic-minerals/feroxyhyte.html</a>
Ferrihydrite	$\text{Fe}(\text{OH})_3$	 <a href="https://commons.wikimedia.org/wiki/File:Structure_ferrihydrite.jpg">https://commons.wikimedia.org/wiki/File:Structure_ferrihydrite.jpg</a>	 <a href="http://msrblog.com/assign/science/geographic-minerals/ferrihydrite.html">http://msrblog.com/assign/science/geographic-minerals/ferrihydrite.html</a>
Goethite	$\alpha$ -FeOOH	 <a href="http://www.diva-portal.org/smash/get/diva2:621003/FULLTEXT01.pdf">http://www.diva-portal.org/smash/get/diva2:621003/FULLTEXT01.pdf</a>	 <a href="https://en.wikipedia.org/wiki/Goethite">https://en.wikipedia.org/wiki/Goethite</a>
Hematite	$\alpha$ -Fe <sub>2</sub> O <sub>3</sub>	 <a href="https://en.wikipedia.org/wiki/Hematite#/media/File:Hematite_structure.jpg">https://en.wikipedia.org/wiki/Hematite#/media/File:Hematite_structure.jpg</a>	 <a href="https://www.fishersci.com/shop/produ">https://www.fishersci.com/shop/produ</a>

Iron compounds	Chemical formula	Crystal structure	Appearance
			cts/hematite-mineral-specimen-6/p-7203007
Iron(II) chloride	$\text{FeCl}_2$	 <a href="https://en.wikipedia.org/wiki/Iron%28II%29_chloride">https://en.wikipedia.org/wiki/Iron%28II%29_chloride</a>	 <a href="https://www.alibaba.com/product-detail/Ferrous-chloride-tetrahydrate-with-FeCl2-4_1600261422277.html">https://www.alibaba.com/product-detail/Ferrous-chloride-tetrahydrate-with-FeCl2-4_1600261422277.html</a>
Iron(III) chloride	$\text{FeCl}_3$	 <a href="https://www.webelements.com/compounds/iron/iron_trichloride.html">https://www.webelements.com/compounds/iron/iron_trichloride.html</a>	 <a href="https://www.exirco.com/news/22/Ferri%20chloride%28solid%29?lang=en">https://www.exirco.com/news/22/Ferri%20chloride%28solid%29?lang=en</a>
Iron(II) sulfate	$\text{FeSO}_4$	 <a href="https://en.wikipedia.org/wiki/Iron%28II%29_sulfate">https://en.wikipedia.org/wiki/Iron%28II%29_sulfate</a>	 <a href="https://en.wikipedia.org/wiki/Iron%28II%29_sulfate">https://en.wikipedia.org/wiki/Iron%28II%29_sulfate</a>
Iron(III) sulfate	$\text{Fe}_2(\text{SO}_4)_3$	 <a href="https://commons.wikimedia.org/wiki/File:Iron%28III%29_sulfate-3D-balls-ionic.png">https://commons.wikimedia.org/wiki/File:Iron%28III%29_sulfate-3D-balls-ionic.png</a>	 <a href="https://mubychem.net/ferric-sulfate.php">https://mubychem.net/ferric-sulfate.php</a>
Maghemite	$\gamma\text{-Fe}_2\text{O}_3$	 <a href="https://www.researchgate.net/publication/299510704_Theoretical_studies_on_structural_properties_of_Iron_Oxides/figures">https://www.researchgate.net/publication/299510704_Theoretical_studies_on_structural_properties_of_Iron_Oxides/figures</a>	 <a href="https://en.wikipedia.org/wiki/Maghemite">https://en.wikipedia.org/wiki/Maghemite</a>

Iron compounds	Chemical formula	Crystal structure	Appearance
Magnetite	$\text{Fe}_3\text{O}_4$	 <a href="https://en.wikipedia.org/wiki/File:Magnetite_structure.jpg">https://en.wikipedia.org/wiki/File:Magnetite_structure.jpg</a>	 <a href="https://www.amazon.com/Raw-Magnetite-Mineral-Specimen-Classrooms/dp/B081BCMD82">https://www.amazon.com/Raw-Magnetite-Mineral-Specimen-Classrooms/dp/B081BCMD82</a>
Pyrite	$\text{FeS}_2$	 <a href="https://en.wikipedia.org/wiki/Pyrite">https://en.wikipedia.org/wiki/Pyrite</a>	 <a href="https://www.britannica.com/science/pyrite">https://www.britannica.com/science/pyrite</a>
Siderite	$\text{FeCO}_3$	 <a href="http://scienceculture.com/advancedpoll/GCSE/sedimentaryrocks.html">http://scienceculture.com/advancedpoll/GCSE/sedimentaryrocks.html</a>	 <a href="https://en.wikipedia.org/wiki/Siderite">https://en.wikipedia.org/wiki/Siderite</a>
Vivianite	$\text{Fe}_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$	 <a href="https://mineralcollectionblog.wordpress.com/2018/07/31/vivianite-group-minerals/">https://mineralcollectionblog.wordpress.com/2018/07/31/vivianite-group-minerals/</a>	 <a href="https://en.wikipedia.org/wiki/Vivianite">https://en.wikipedia.org/wiki/Vivianite</a>