

Module: Redox reactions (main focus: Sek I)

Glossary of important words

English	German	Example
redox reaction	Redoxreaktion	In a redox reaction an oxidation and a reduction take place at the same time. Redox reactions are displacement reactions: If iron reacts with copper oxide, iron displaces the copper.
oxidation	Oxidation	Oxidation is the addition of oxygen. In an oxidation an oxide can be produced.
reduction	Reduktion	Reduction is the loss of oxygen. In a reduction oxygen is removed from a compound.
to oxidise	oxidieren	Carbon is oxidized. Carbon gains oxygen.
to reduce	reduzieren	Lead oxide is reduced. The lead oxide loses its oxygen.
reducing agent	Reduktionsmittel	A reducing agent takes away oxygen. It is oxidized.
oxidising agent	Oxidationsmittel	An oxidizing agent helps the oxidation to take place. It is reduced.
oxygen	Sauerstoff	Oxygen is in the air around us. We need it to breathe. It is also involved in most redox reactions.
to react with the oxygen from the air	mit dem Luftsauerstoff reagieren	Reactive metals react with the oxygen from the air forming oxide coatings.
to form an oxide	ein Oxid bilden	If copper is heated in the air, an oxide is formed: copper oxide.
to extract metals from ores	Metalle aus Erzen extrahieren	In nature you find iron chemically bonded in ores. In order to get pure iron you have to extract it from its ore.
exothermic	exotherm	A reaction is exothermic, if heat is given off. Mostly oxidations are exothermic.
endothermic	endotherm	A reaction is endothermic, if heat is needed to keep the reaction going. Mostly reductions are endothermic.
to give electrons	Elektronen abgeben	If s.th. gets oxidized, it gives electrons.
to accept electrons	Elektronen aufnehmen	If s.th. gets reduced, it accepts electrons.
combustion	Verbrennung	Combustion is a rapid combination e.g. of a fuel with oxygen. Usually heat and/or light are set free and new substances are produced.
ore	Erz	Most metals are found in rocks called ores. Many ores contain metal oxides or metal sulfides.
metal	Metall	Metals conduct electricity and heat. Examples: copper, iron, silver.
non-metal	Nichtmetall	Non-metals usually do not conduct electricity. Some examples are oxygen, sulfur and chlorine.
reactivity series	Redoxreihe	The reactivity series is like a "league table" for metals. The most reactive metals (like potassium) are at the top of the table, the least reactive metals (like platinum) are at the bottom. So the metals are put in order by looking at their reactivity.
to rust	rosten	If something rusts, a slow oxidation takes place. When iron rusts in humid air it gets a brown, rough surface.
to tarnish	anlaufen	Silver tarnishes and has a black coating after some time.
blast furnace	Hochofen	In a blast furnace iron is extracted from its ore. Carbon monoxide serves as a reducing agent.