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American Chemical Society including ACS Legacy Collection (1995-present)
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This pathfinder contains suggested materials on Chemical Reaction that are available at the College of Engineering Library II. However, some references were

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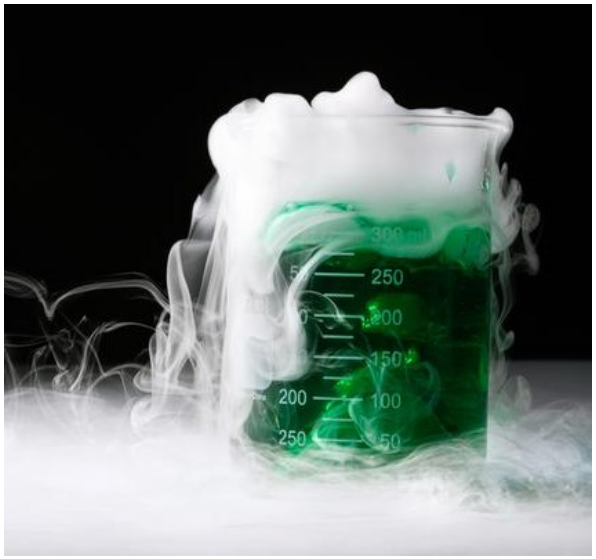

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Chemical Reaction

PATHFINDER

Chemical Reaction

Chemical reactions are the processes by which chemicals interact to form new chemicals with different compositions. Simply stated, a chemical reaction is the process where reactants are transformed into products. How chemicals react is dictated by the chemical properties of the element or compound- the ways in which a compound or element undergoes changes in composition.

Describing Reactions Quantitatively

Chemical reactions are constantly occurring in the world around us; everything from the rusting of an iron fence to the metabolic pathways of a human cell are all examples of chemical reactions. Chemistry is an attempt to classify and better understand these reactions.

Chemical Equation

A chemical reaction is typically represented by a chemical equation, which represents the change from reactants to products. The left hand side of the equation represents the reactants, while the right hand side represents the products. A typical chemical reaction is written with stoichiometric coefficients, which show the relative amounts of products and reactants involved in the reaction. Each compound is followed by a parenthetical note of the compound's state of 2: (l) for liquid, (s) for solid, (g) for gas. The symbol (aq) is also commonly used in order to represent an aqueous solution, in which compounds are dissolved in water. A reaction might take the following form:

$$A(aq)+B(g)\rightarrow C(s)+D(l)$$

In the above example, A and B, known as the reactants, reacted to form C and D, the products.

To write an accurate chemical equation, two things must occur:

1. Each product and reactant must be written using its chemical formula, e.g. $H2$

2. The number of atoms of each element must be equal on both sides of the equation. Coefficients are used in front of the chemical formulas in order to help balance the number of atoms, e.g.,

$$2Mg+O2\rightarrow 2MgO$$

Source: http://chemwiki.ucdavis.edu/Analytical_Chemistry/Chemical_Reactions/

The rusting of a chain is an example of a chemical reaction

Photo and Caption:
http://chemwiki.ucdavis.edu/Analytical_Chemistry/Chemical_Reactions/Chemical_Reactions

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A thermite reaction using iron(III) oxide. The sparks flying outwards are globules of molten iron trailing smoke in their wake.

Source: https://en.wikipedia.org/wiki/Chemical_reaction