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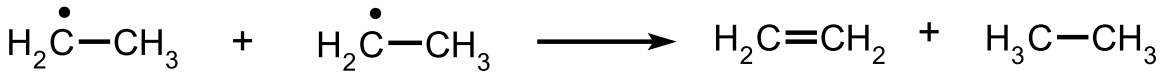
disproportionation

Also contains definition of: radical disproportionation

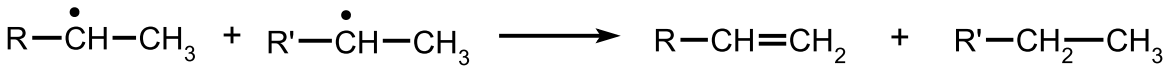
Synonym: dismutation

1. Any chemical reaction of the type  , where A, A' and A'' are different chemical species. For example:

The reverse of disproportionation is called comproportionation. A special case of disproportionation (or 'dismutation') is 'radical disproportionation', exemplified by:

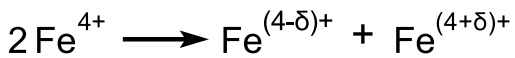


Reactions of the more general type:



are also loosely described as radical disproportionations.

Source:
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1107
The following somewhat more restricted usage of the term prevails in inorganic chemistry.
PAC, 1994, *66*, 577 *(Definitions of terms relating to phase transitions of the solid state (IUPAC Recommendations 1994))* on page 581

2. A reversible or irreversible transition in which species with the same oxidation state combine to yield one of higher oxidation state and one of lower oxidation state. Example:  The term also applies to an internal oxidation-reduction process as occurs, for example, among the iron atoms of $CaFeO_3$, where  , at Fe subarrays on lowering the temperature.

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Source:
PAC, 1994, *66*, 577 *(Definitions of terms relating to phase transitions of the solid state (IUPAC Recommendations 1994))* on page 581

