Reactivity 3.3 · Electron sharing reactions

International Baccalaureate · IB Diploma · Chemistry · HL · Vocabulary in context

Word	Example
free radical /fri: 'rædɪkl/	A chlorine atom with one unpaired electron is a **free radical**.
unpaired electron /ʌn'peəd ɪ'lektrɒn/	An **unpaired electron** occupies an orbital alone.
homolytic fission /ˌhɒmə'lɪtɪk 'fɪʃn/	In **homolytic fission**, each atom takes one electron from the bond.
single-barbed arrow	A **single-barbed arrow** shows movement of one electron.
ultraviolet light /ˌʊltrə'vaɪəlɪt laɪt/	**Ultraviolet light** starts the reaction between methane and chlorine.
non-polar /nɒn 'pəʊlə/	**Non-polar** C–H bonds are not attacked by water or enzymes. C–H
functional group /'fʌŋkʃənl gru:p/	The –OH **functional group** makes a compound an alcohol. –OH
radical substitution /'rædɪkl ˌsʌbstɪ'tju:ʃn/	**Radical substitution** can replace hydrogen in methane with chlorine.
chain reaction /tʃeɪn rɪ'ækʃn/	A **chain reaction** keeps going through steps that regenerate reactive particles.
initiation /ɪˌnɪʃɪ'eɪʃn/	In **initiation**, ultraviolet light splits chlorine into two radicals.

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propagation /ˌprɒpəˈgeɪʃn/	During **propagation**, a radical reacts and another radical forms.
termination /ˌtɜːmɪˈneɪʃn/	In **termination**, two radicals join and the chain stops.
product mixture	Further substitution can create a **product mixture**.
chlorofluorocarbon	A **chlorofluorocarbon** contains carbon, chlorine and fluorine.
stratosphere /ˈstrætəsfɪə/	The **stratosphere** contains the protective ozone layer.
ozone /ˈəʊzəʊn/	An **ozone** molecule contains three oxygen atoms.

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