Chemical Reactions Occurring in Water

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10:47 PM

Acid-base Dissolution Oxidation- Chelation Photograthesis Gas Solute Colloidal exchange exchange suspensions or Precipitation reduction

Aud-base Reactions:

$$CO_2 + H_2O \longrightarrow H^+ + HCO_3^-$$

 $CO_3^{2-} + H_2O \longrightarrow OH^- + HCO_3^-$

2. Dissolution or Precipitation Reactions:

$$CaCO_3(S) + CQ_2 + M_2O \longrightarrow CaCMCO_3)_2$$
 Dissolution Rxⁿ soluble

$$Ca^{2+} + CQ_3^{2-} \longrightarrow CaCQ_3(S)$$
 Precipitation R_x^n

Oxidation-Reduction Reactions: 3.

$$2[CH_{2}O] + SO_{4}^{2-} + 2H^{+} \longrightarrow H_{2}S(A) + 2HO+2CO_{2}$$
Biodefradable
biomass
$$NH_{4}^{+} + 2G \longrightarrow NO_{3}^{-} + 2H^{+} + H_{2}G$$

Chelation Reactions in which an organic moderate with two or more group capable of binding simultaneously to a metal ion forms a metal chelate. e.g. Binding of fulvire auid (water soluble non-biodegradable organic

molecule) molecule [FA] produced by the partial biodegradation of plant matter to an FeCII) to produce a metal chelate that

Mode of biding of fulvic acid

vid carboxylic acid and phenolic rig two with a consuglic Carboxylic of group Froup 0-M+

Photosynthesis: by aquatic algae

- Gras Exchange Reactions: frimarily of and cos between water and atmosphere.
- Solute Exchange Reactions: Between water and sediments. Colloidal Suspensions: are consisting of very small particles such as clay particles or bacterial cells suspended in water.