

Department of Civil Engineering  
2010 Summer Semester  
Yoshimura Chihiro

*Aquatic Environmental Science*

12. Stoichiometry and Ecology

Outline (12 July 2010)

1. Stoichiometry
    - Stoichiometry and chemical kinetics
    - Homeostasis, thermoregulation
    - Redfield ratio
    - Dynamic equilibrium
    - Element displacement rate
  2. Stable isotope ratio
    - Stable isotope
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    - Isotope and food web, isotopic fractionation
  3. Ecology
    - What is an ecosystem?
    - Components of an ecosystem
    - Succession
    - Ecological niche, environmental gradient
    - Interspecies relationship
    - Ecological disturbance
    - Ecosystem management
  4. Final words
  5. Exercise
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