



Environmental Chemistry Theory

CY1018



भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Department of Chemistry

CLASS LINK for B slot

CY1018 (CE+EE+ME+MnC+BME+BT+Comp.Engg.+IC)

MONDAY: 10:00 to 11:00

Join from the meeting link

<https://iithyd.webex.com/iithyd/j.php?MTID=m74bcd59b23cab53794b58f36f39f7680>

WEDNESDAY: 09:00 to 10:00

Join from the meeting link

<https://iithyd.webex.com/iithyd/j.php?MTID=m5984de3eb78a0aa1a03729440e3785c0>

THURSDAY: 11:00 to 12:00

Join from the meeting link

<https://iithyd.webex.com/iithyd/j.php?MTID=m6486574d8c23166d15c03f6e7a846180>

CLASS LINK for S slot

CY1018 (AI+CH+CS+EP+ES+MS)

TUESDAY: 16:00 to 17:30

Join from the meeting link

<https://iithyd.webex.com/iithyd/j.php?MTID=m5db0a582b01e7b7dd668dfbfe408570d>

FRIDAY: 14:30 to 16:00

Join from the meeting link

<https://iithyd.webex.com/iithyd/j.php?MTID=m219fbc79bd86c2e9290b487f04cde25a>

Course Content

Know our environment (chemistry of lithosphere, energy balance, sustainability and recycle), Know about global warming (infrared absorption, molecular vibration, atmospheric window, residence time of greenhouse gases, evidences and effects of global warming), Deeper analysis of atmospheric pollution (Chemistry of CO, NO_x, VOCs, SO₂, Industrial smog, photochemical smog), Ozone depletion (production, catalytic destruction), Organic Chemicals in the Environment, Insecticides, Pesticides, Herbicides and Insect Control, Soaps, Synthetic Surfactants, Polymers, and Haloorganics. Fate of organic/inorganic chemicals in natural and engineered systems (fate of polymers after use, detergents, synthetic surfactants insecticides, pesticides etc. after use), Aspects of transformations in atmosphere (microbial degradation of organics-environmental degradation of polymers, atmospheric lifetime, toxicity). Green Chemistry and Industrial Ecology. Future challenges (CO₂ sequestering, Nuclear energy). A project on environment related topic.

INSTRUCTORS

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Dr. Krishna Gavvala

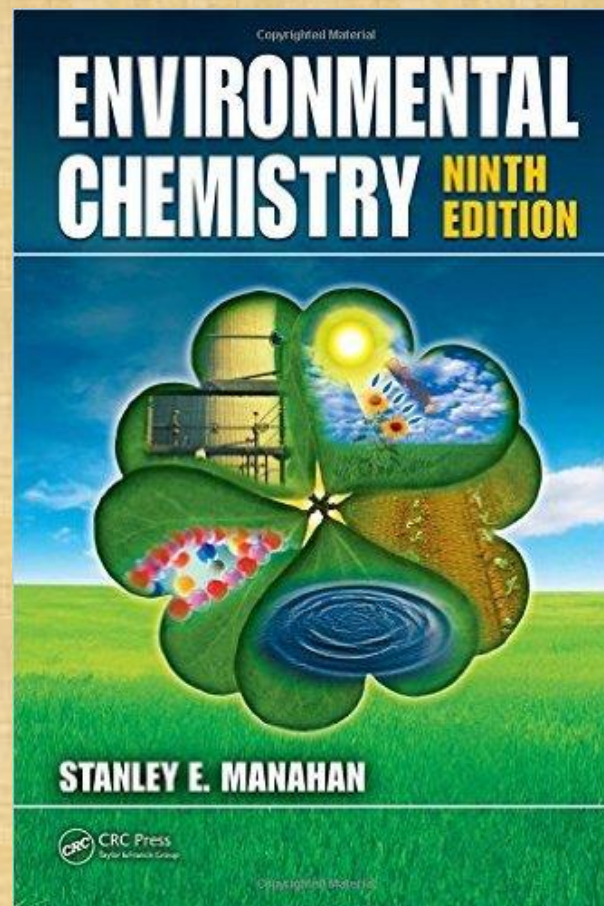
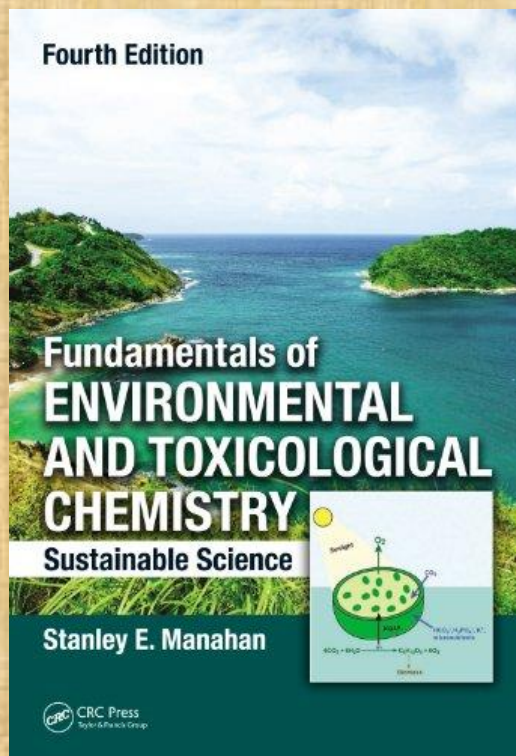
Email: kgavvala@chy.iith.ac.in



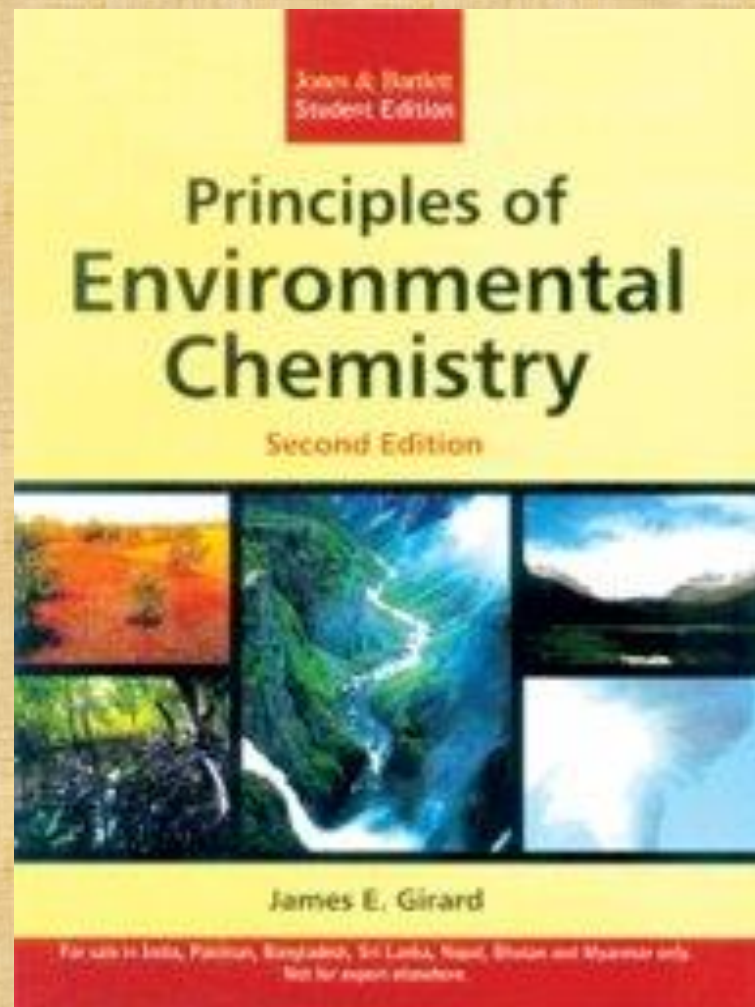
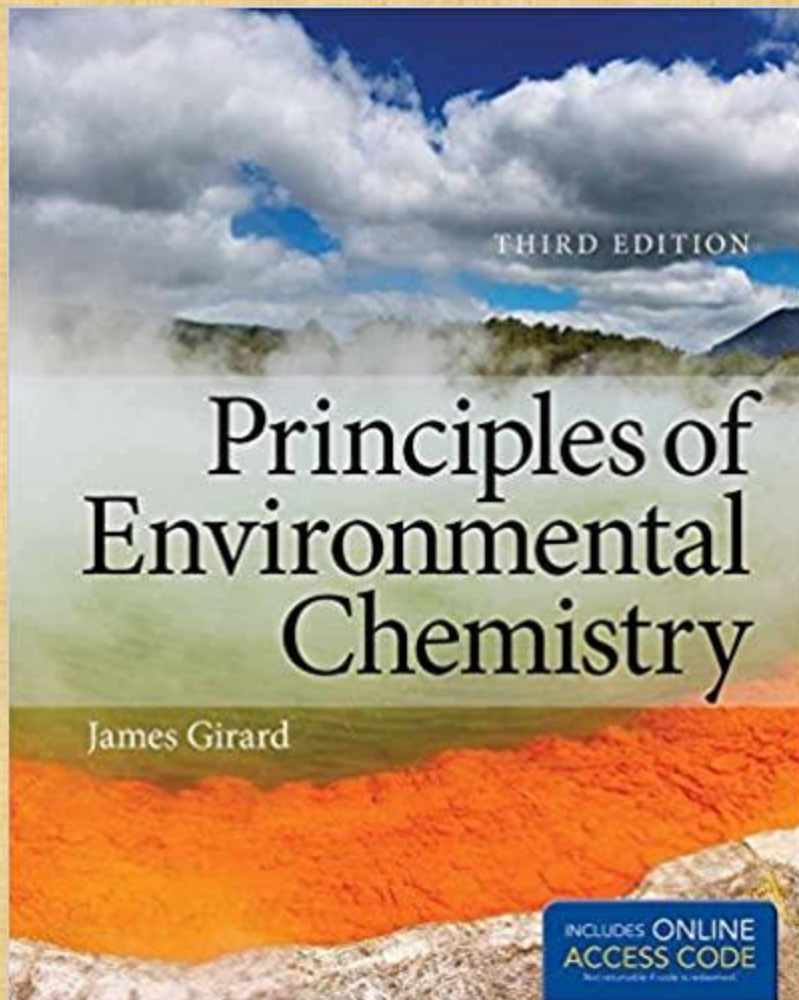
Environmental Chemistry Theory

Reference books

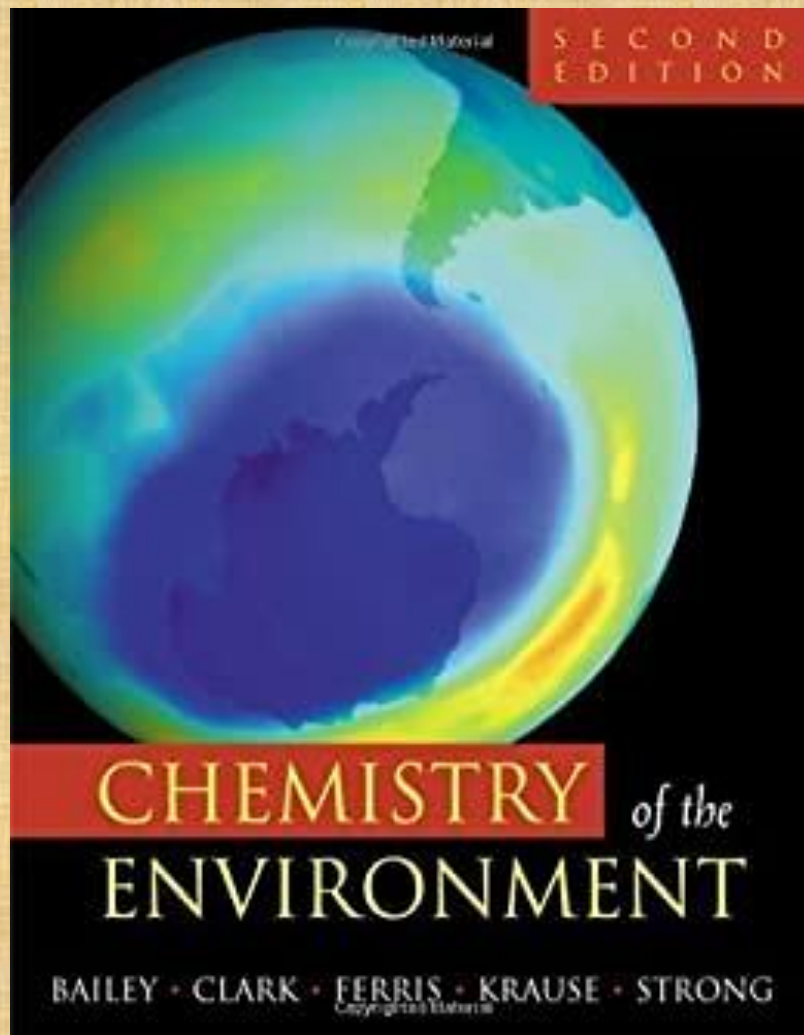
Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science, Fourth Edition Kindle Edition



Principles of Environmental Chemistry By James E. Girard



**Chemistry of the Environment, Second Edition by R. A. Bailey,
H. M. Clark, J. P. Ferris, S. Krause, R. L. Strong**



GRADING and EXAMS:

SEGMENT 1 (Nov 29 to Jan 3)

QUIZ 1

10 Marks

MID SEM

20 Marks

SEGMENT 2 (Jan 5 to Feb 3)

QUIZ 2

10 Marks

MID SEM

20 Marks

END EXAM

40 Marks

**A+, A, A-, B, B-, C, C-,
and D carrying credit
points of 10, 10, 9, 8, 7,
6, 5, and 4, respectively**

Total 100 Marks

All should have smart phone
as all the exam will be via SAFE app

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