Physics and Chemistry: In the Context of Energy and Climate at the Global and Molecular Level

NEW COURSE

James G. Anderson **EPS 135**

Dept. of Chemistry & Chemical Biology, Dept. of Earth & Planetary Sciences, and School of Engineering & Applied Sciences

- *Energy: Conceptual Foundation and the Laws that Govern Its Transformation*
- *Thermochemistry: Development of the First Law of Thermodynamics, Entropy and the Second Law of Thermodynamics*
- *Free Energy, Equilibria, Acid-Base Control of Life Systems*
- *Electronic Properties of Atoms and Bonding Structure of Molecules*
- *Structure and Properties of Materials, Fermi Levels, and Photovoltaics*
- *Electromagnetic Induction, Electric Power Generation, AC and DC Circuits*
- *Electrochemistry and Photochemistry: Electrons, Photons and their Interaction at the Molecular Level*
- *Kinetics and Catalysis: The Principles that Govern the Rate at Which Chemical Reactions Occur*
- *Nuclear Chemistry: Principles and Practices*