

New Course Offering!

3.38 Ceramics: Processing, Properties and Functional Devices

Are you interested in exploring solid-state materials for applications in energy, computing, or catalysis? Or how about investigating the science of colloidal processing, fabricating crystalline/ glass-type ceramics, or understanding structure-property relationships? Then this is the course for you! In Course 3.38, we will explore modern ceramic processing - ranging from large-scale synthesis, 3D manufacturing and printing to nanoscale-thin film structures integrated for microelectronics useful for material, chemical, electronic or mechanical engineers. Examples of devices studied include optoelectronic materials, sensors, memories, batteries, solar-to-fuel convertors, and solid oxide fuel cells. As part of this class, you will be provided the skills and guidance to design ceramic and glassy materials for large-scale components as energy storage or convertors, or for nanoscale electronic applications in information storage devices. Additionally, the course will integrate projects that will strengthen student's proposal writing and presentation skills. The course will take place Tuesdays and Thursdays from 1-2:30 pm. If interested, please contact Prof. Jennifer Rupp at jrupp@mit.edu. We look forward to seeing you this Fall!

