

Navid Chapman Abstract

CHM 642 – Graduate Seminar

Professor Joel Dain

Photosynthetic Energy Sources

An overview of the strengths and deficiencies of both natural and established artificial photosynthetic energy sources. This will be followed by an insightful look into current chemical research involved in a new class of light powered clean energy sources. Current goals for future solar powered water splitting technology include cost-effective, energy-efficient, self-assembling, self-repairing, non-toxic, clean waste, small size, and wide operating ranges. Modern researchers seek to improve upon the photosystem designs used by bacteria and plants in order to establish a man-made fossil fuel alternative to satisfy the increasing global energy demands of both the developed and developing world.