



Ming-Yu Ngai

Photoredox Catalysis in Organic Chemistry

Professor Ming-Yu Ngai believes that a career in organic chemistry is for you if you enjoy hands-on experiments and activities such as cooking and building things. If you are interested in becoming an organic chemist, be sure to take classes such as chemistry, biology, physics, mathematics, and computer science.

Organic chemistry is a branch of chemistry that studies the structure, properties, and reactivity of compounds that contain *carbon*.

Professor Ngai researches a process known as *photoredox catalysis*. This involves using *visible light* to drive chemical *reactions*, similar to how plants use sunlight in the process of photosynthesis. The goal of photoredox catalysis is to transform simple, inexpensive chemicals into valuable products that can be used to study and treat human diseases.

Professor Ngai is also studying the effect of *molecular editing* on *carbohydrates*. Carbohydrates are essential in many biological processes, and making selective changes to carbohydrates could lead to new treatments and *vaccines* for diseases like *cancer*.

Puzzle of the Week

1. IOARNCG ECMYTSIHR _____
2. NRCAOB _____
3. XOTPROEOHD _____
4. SCLAAYTIS _____
5. IESBVLI THGLI _____
6. OSRNCEATI _____
7. RECLAUOML GITDEIN _____
8. OEBTHDCSR YARA _____
9. NVIAECSC _____
10. ERCACN _____

