

## **CY-610 Microwave Assisted Organic Synthesis**

Microwave Assisted Organic Synthesis (MAOS): Theory, Loss factors of different solvents, Microwave Effects, Processing techniques, Difference b/w Conventional & MW Heating, Advantages of MOAS, Higher Temperatures, Scalability, Homogeneity, Reproducibility, Flow chemistry, Open and Closed Vessel Techniques. Microwave Instruments: History, Overview of different types Domestic MW Reactors, Dedicated MW reactors, Comparison of advantages and applications of different instruments, Synthesizer, Initiators, CEM, Single and Multimode Reactors. Types of Reactions: Theory and Practical approach Transition-Metal-Catalyzed CC Bond Formations Reactions, Transition-Metal-Catalyzed Carbon–Heteroatom Bond Formation Reactions.