

MATE130007	高分子材料化学	学分：2	周学时：2
	Polymer Materials Chemistry	总学时：36	
预修课程： 有机化学，物理化学			
修读对象：材料科学系本科生			

中文课程简介（150 字以内）

本课程的教学目的是通过教学使学生掌握几种较为成熟的基本聚合反应概念，和基本聚合反应原理，几种主要的聚合方法，使学生对高分子材料性能与高分子材料的制备上有基本认识。

课程基本内容：第一章：概述与基本概念，第二章：逐步聚合，第三章：自由基聚合，第四章：自由基共聚，第五章：聚合方法，第六章：离子聚合，第七章：配位聚合，第八章：开环聚合，第九章：聚合物的化学反应等内容。以聚合反应机理和动力学，热力学为主阐述聚合原理，介绍较为基本的聚合方法。

英文课程简介

Course objectives: In this course of polymer material chemistry, the students can get a proper understanding of fundamental concepts of polymer science and the general principles of polymerization reaction. The students also need to know characterization of polymer materials and general principles of polymer synthesis.

Course Content: Chapter 1. Introduction; Chapter2.Step polymerization; Chapter3.radical polymerization;Chapter4. Radical copolymerization; Chapter5.Methods of polymerization;Chapter6.Ionical polymerization; Chapter7.Coordination ; Chapter 8. Ring-opening polymerization; Chapter 9.Chemical reaction of polymer. This lesson is to present these general principles of polymerization, with emphasis on the mechanisms, kinetics and thermodynamics and to introduce the fundamental synthetic methods of polymer.