

MATE130068 MATE130069	材料分析化学（上）（下）	学分：4	周学时：4
	Analytical Chemistry of Materials I、II	总学时：72	
预修课程：普通化学、高等数学、普通物理			
修读对象：材料科学系材料化学专业学生			

中文课程简介（150 字以内）

材料分析化学涵盖无机材料、聚合物材料、纳米材料、功能材料等的化学分析和仪器分析，分为材料分析化学（上）、材料分析化学（下）两部分。材料分析化学（上）主要讲述材料发展与分析化学的关系、定量分析和化学分析的基本知识、电化学分析基础和色谱分析技术；材料分析化学（下）主要讲述材料成分分析基础、材料结构分析基础、材料形貌分析基础、材料表面分析基础、材料分析方法的选择等内容。让学生在掌握分析化学基本知识的基础上，能够利用所学到的分析方法解决材料化学领域的实际问题。

英文课程简介

Analytical Chemistry of Materials is the study of the identification, quantification and separation of the chemical components of inorganic materials, polymer materials, nano materials, functional materials and so on. Analytical Chemistry of Materials can be separated into Analytical Chemistry of Materials I and Analytical Chemistry of Materials II. Analytical Chemistry of Materials I is focused on the classical analytical method, such as the basics of the analytical chemistry of materials, quantitative analysis, electrochemical analysis, and chromatography analysis. Analytical Chemistry of Materials II is focused on the modern instrumental analytical methods, such as composition analysis of materials, structure analysis of materials, morphology of materials, surface analysis of materials, the choice of materials analysis methods, and the etc. The students should have experience and training in using a range of instruments and classical analytical methods for a wide variety of analyses when they have finished learning these lectures.