

223 M1340 (223 D1330)
高等物理化學(專論)三 (3 學分)

(Discussion in)Advanced Physical Chemistry (III) (3)

中文	英文
<p><u>核心教材</u> 氣體動力學(馬克士威速度分佈、平均值)、化學反應速率(速率定律、反應機制、均相觸媒)、化學反應理論(位能曲面、碰撞理論、活化複體理論)、傳輸性質(擴散、含時傳輸)、液相反應(籠子效應、阻力與擴散、帶電粒子溶液)、固態表面反應(吸附與脫附、表面反應與擴散)、光化學(光物理過程、光解動態)、分子反應動態(散射、能量移轉、反應動態)</p> <p><u>選擇性教材</u> 溫度與能量、速率量測、自由基反應、觸媒反應、熱導、普瓦澤伊方程、朗之萬方程、脫附溫度效應、大氣化學</p>	<p><u>Core materials</u> Kinetic theory of gases (Maxwell distribution of speeds, mean values), rates of chemical reactions (rate law, reaction mechanism, homogeneous catalysis), theories of chemical reactions (potential energy surfaces, collision theory, activated complex theory), transport properties (microscopic basis, diffusion, time-dependent transport), reactions in liquid solutions (cage effect, friction and diffusion, charged species in solutions), reactions at solid surfaces (adsorption and desorption, reaction at surface, surface diffusion), photochemistry (photophysical processes, photodissociation dynamics), molecular reaction dynamics (molecular scattering, molecular energy transfer, molecular reaction dynamics)</p> <p><u>Optional materials</u> Temperature and energy, measurements of reaction rates, free radical reaction, enzyme kinetics, thermal conductivity, Poiseuille formula, Langevin equation, temperature-dependent desorption, atmospheric chemistry.</p>