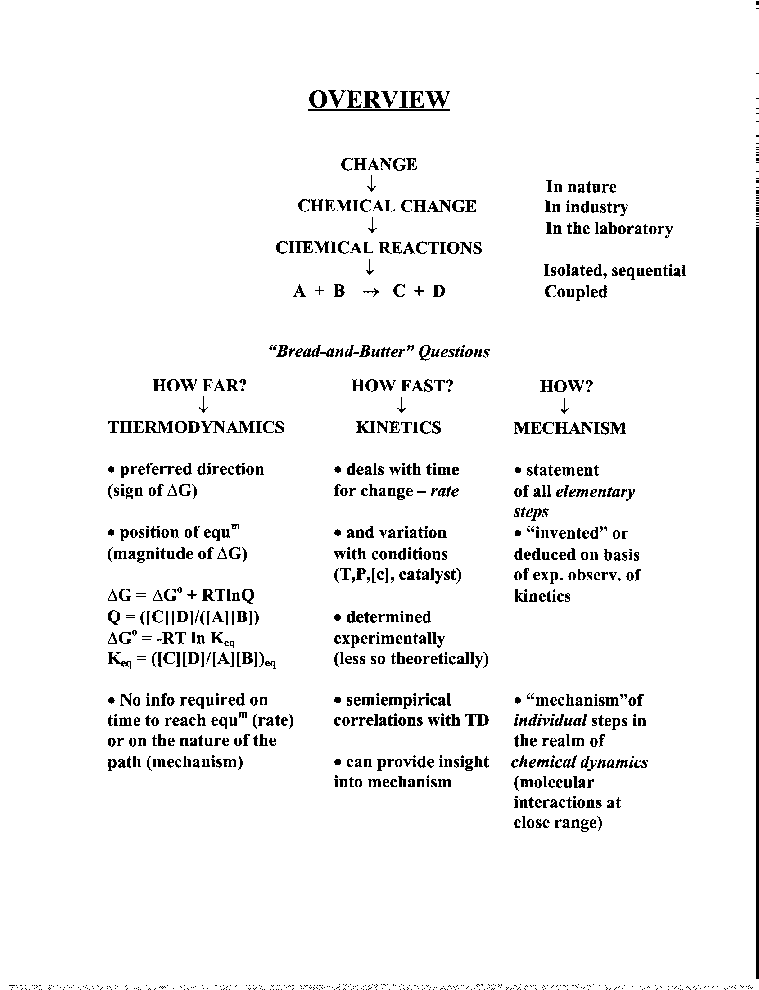
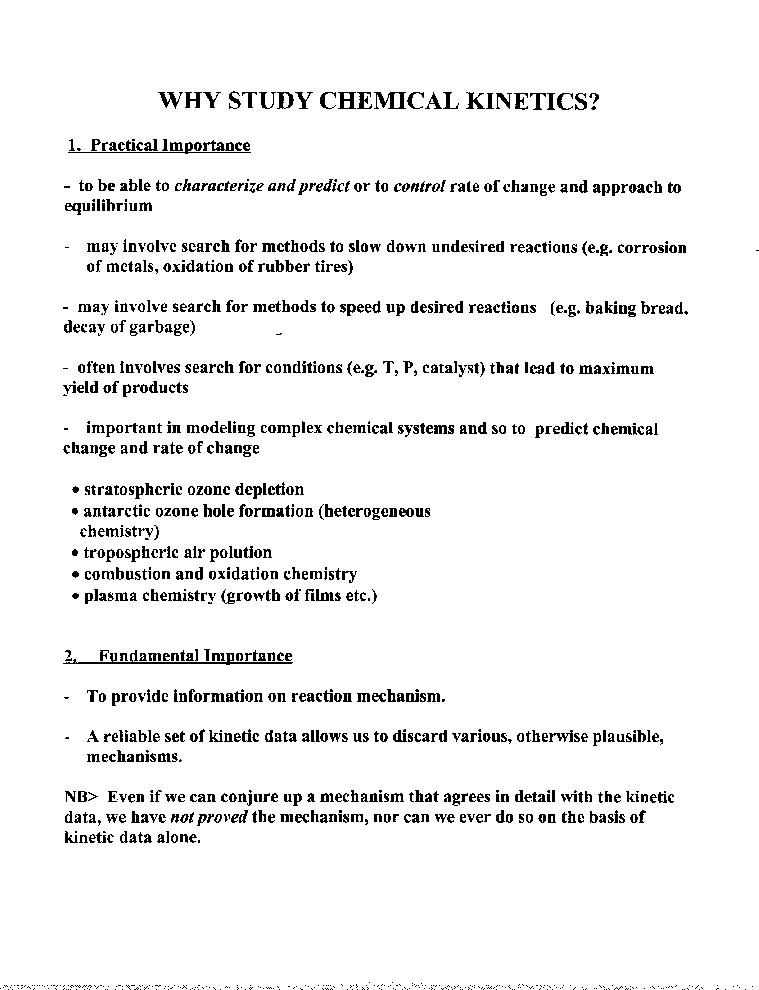
**SUMMARY OF LECTURES ON THE DISCIPLINE "CHEMICAL KINETICS AND ELECTROCHEMISTRY", 2ND COURSE, 2022-2023**

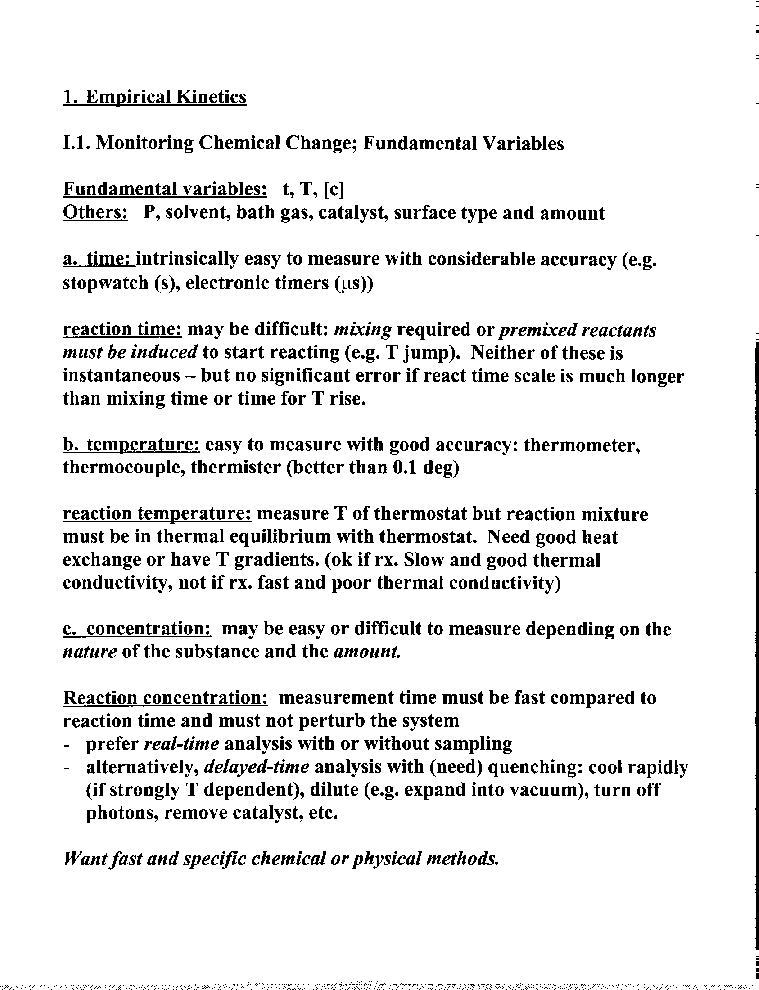
**(15 LECTURES)**

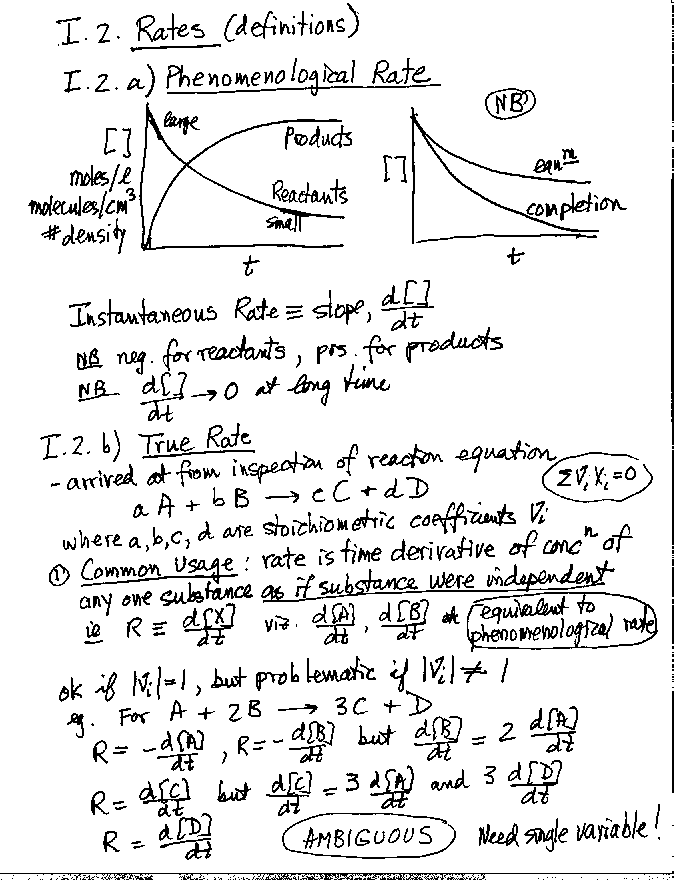
**1-LECTURE**

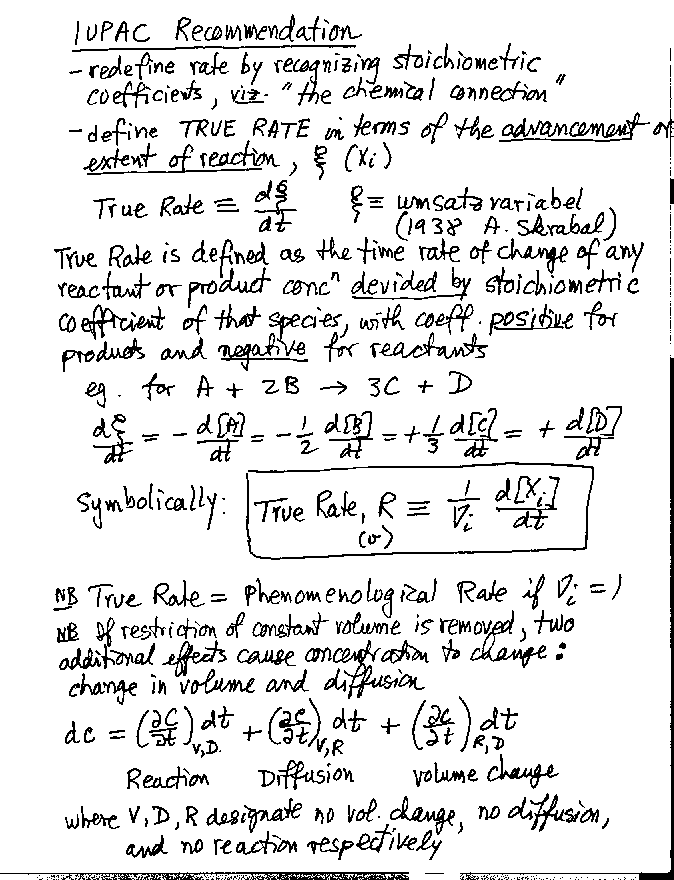
**INTRODUCTION. EMPIRICAL KINETICS. WHY STUDY CHEMICAL KINETICS? MONITORING CHEMICAL CHANGE. RATES**

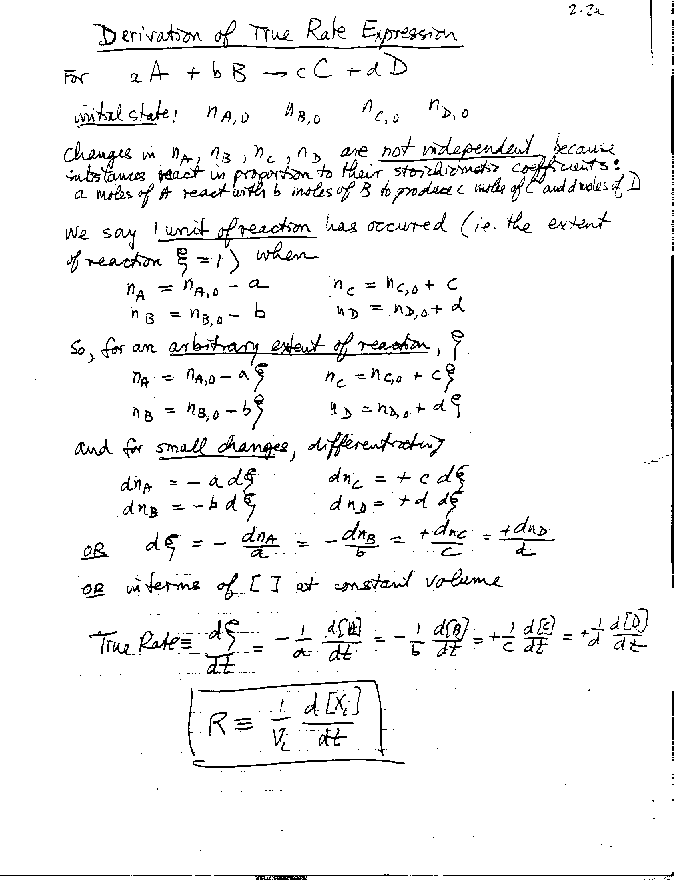
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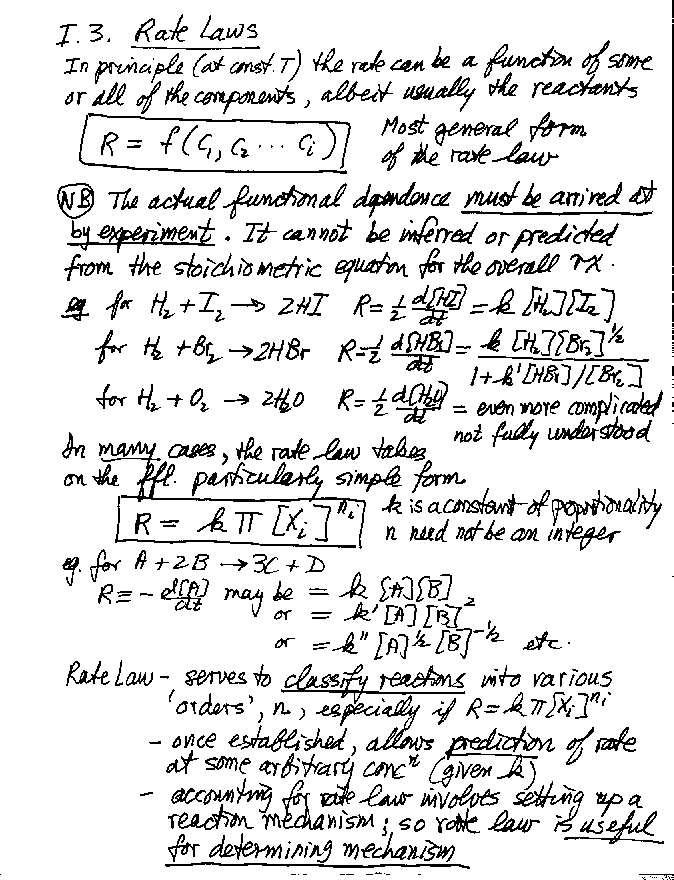
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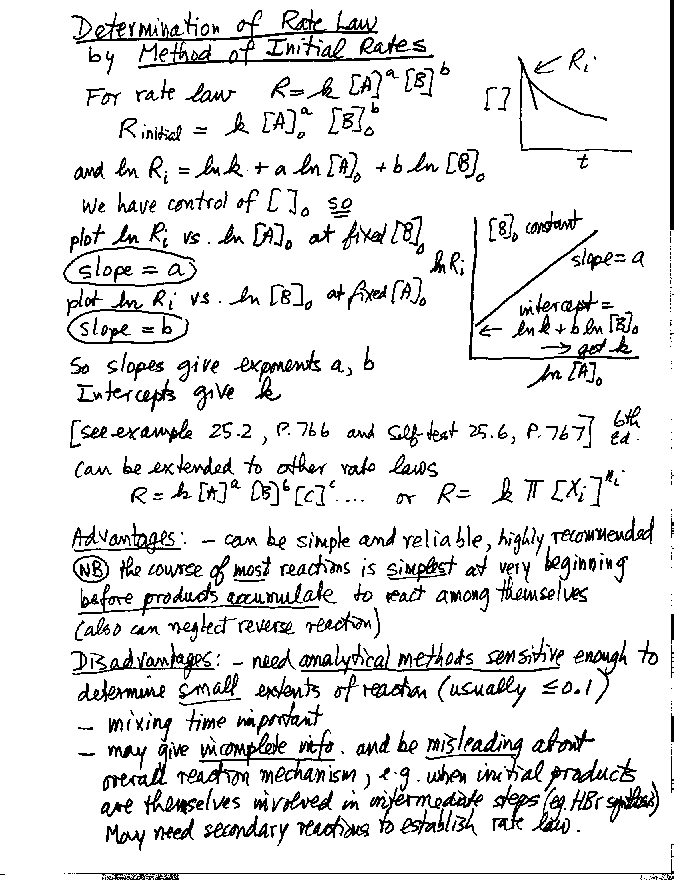
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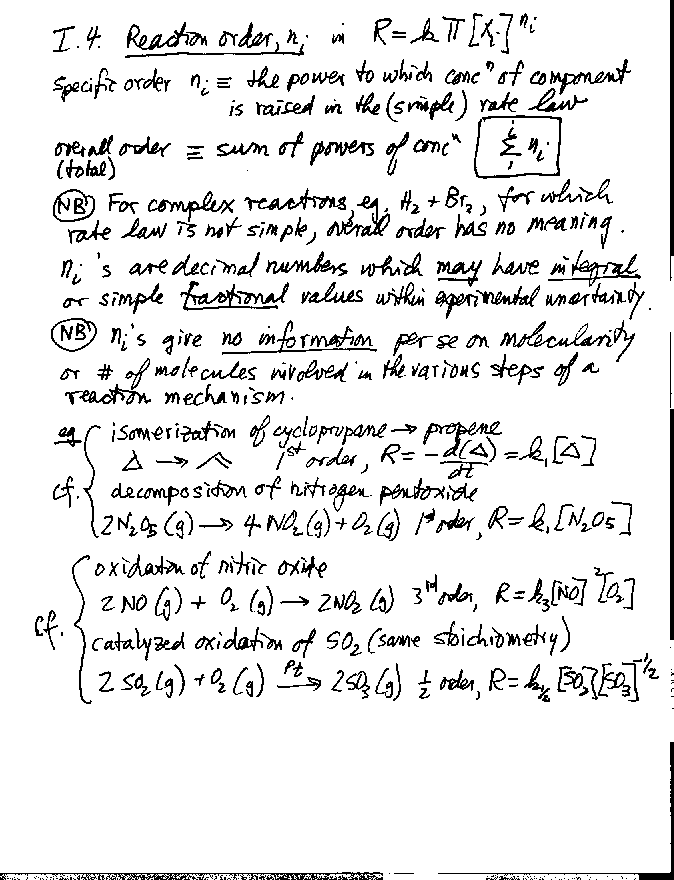
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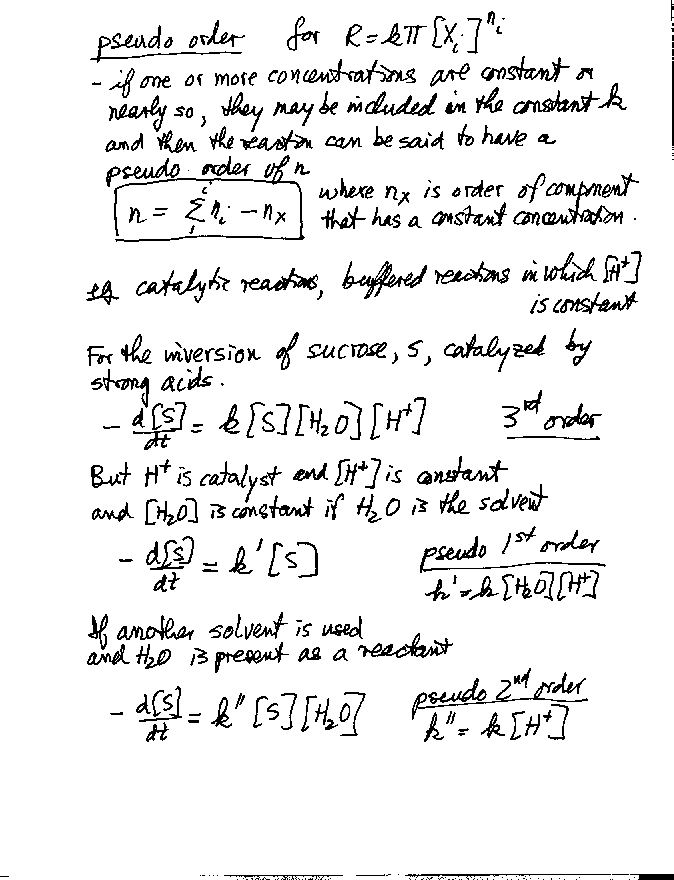
**2-LECTURE**

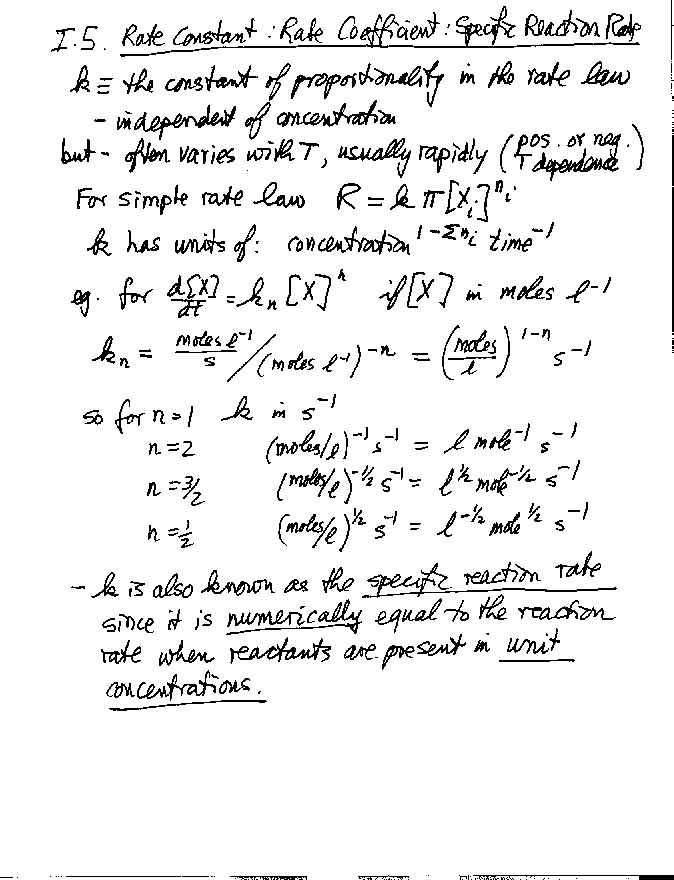
**RATE LAWS. REACTION ORDER. SPECIFIC REACTION RATE**

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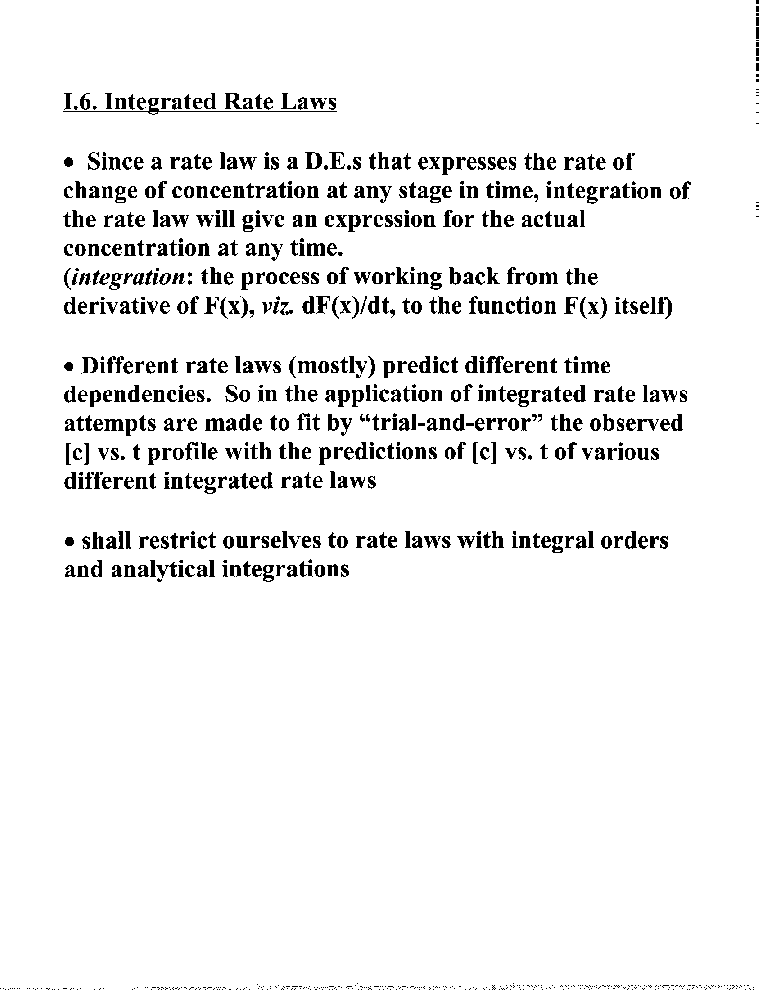
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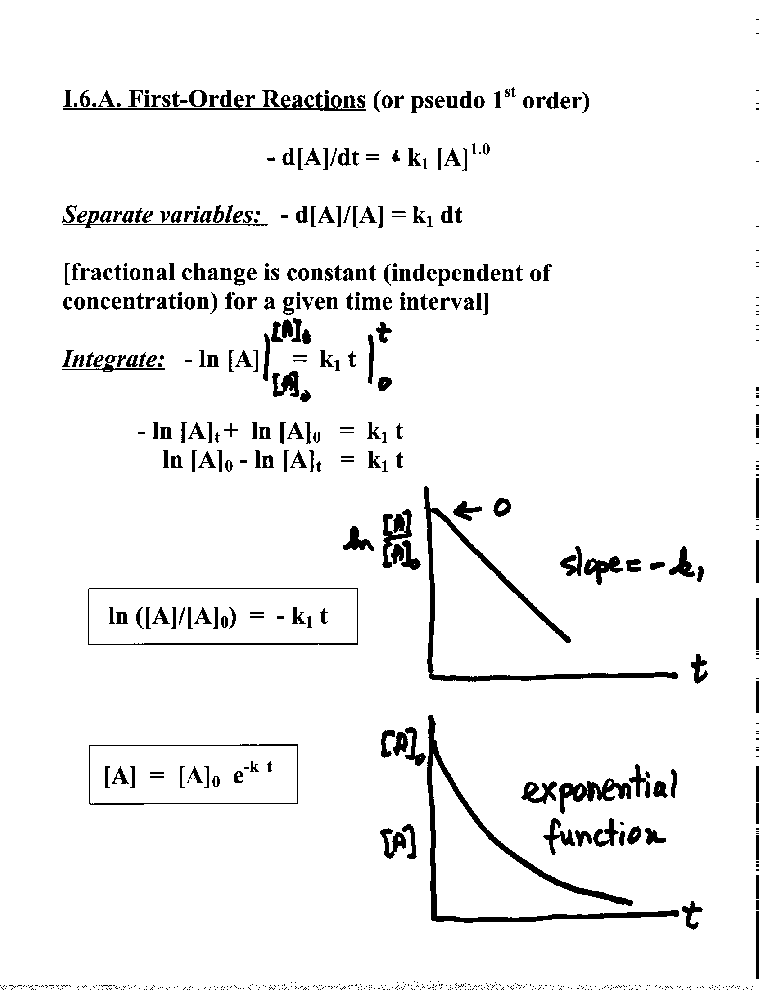
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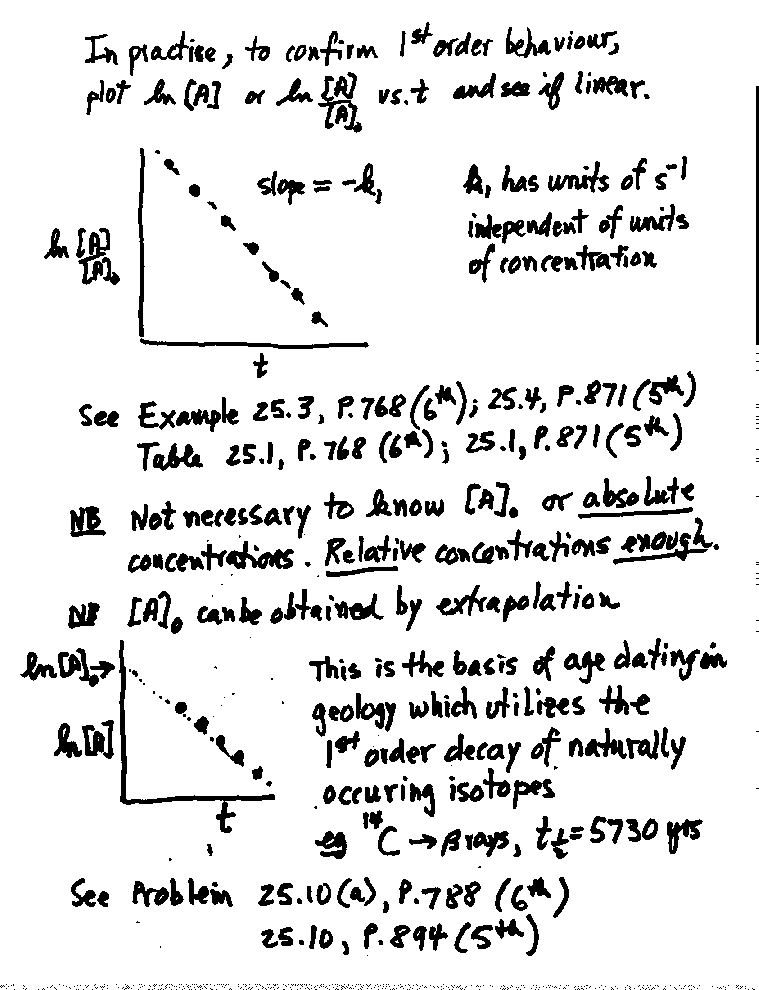
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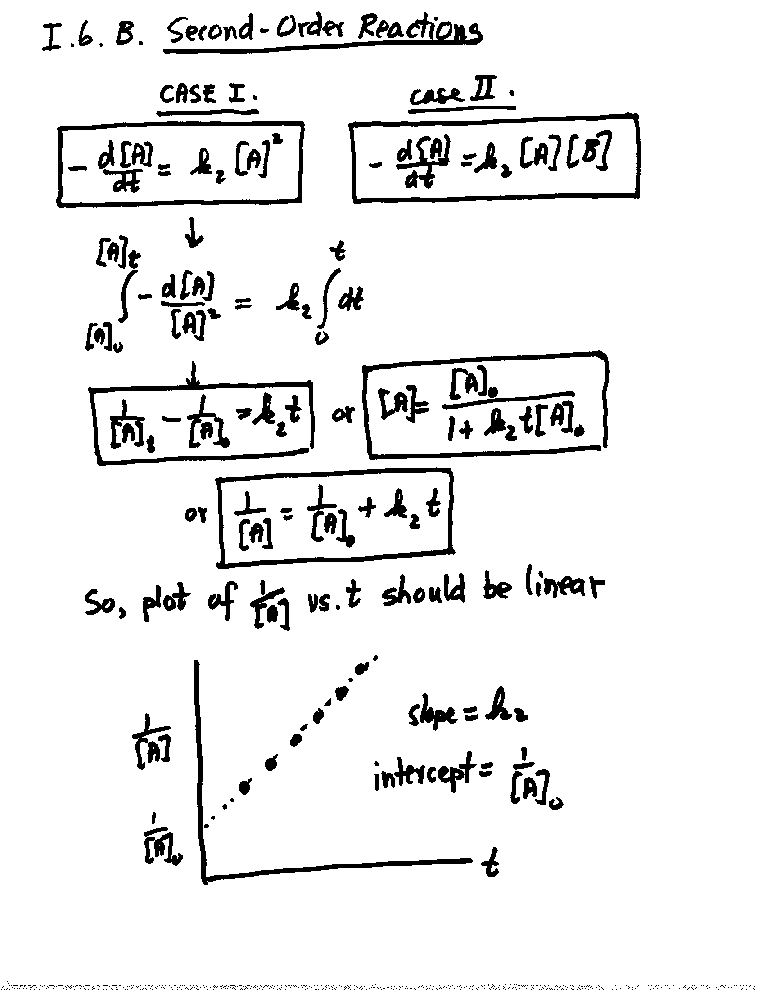
**LECTURE 3**

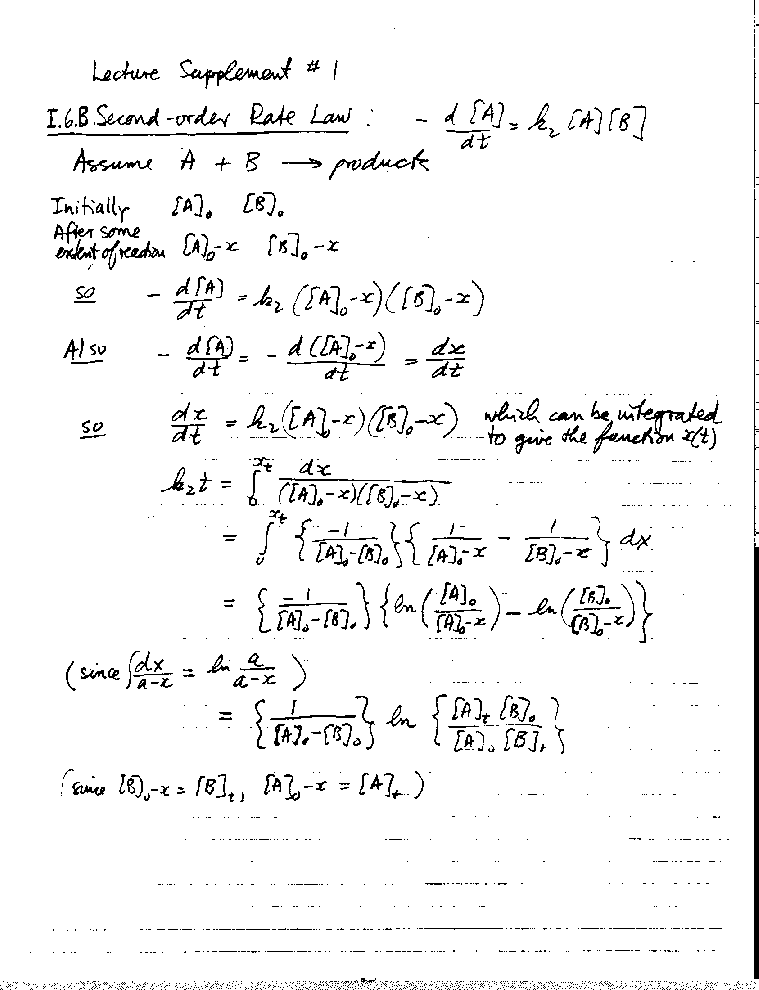
**INTEGRATED RATE LAWS**

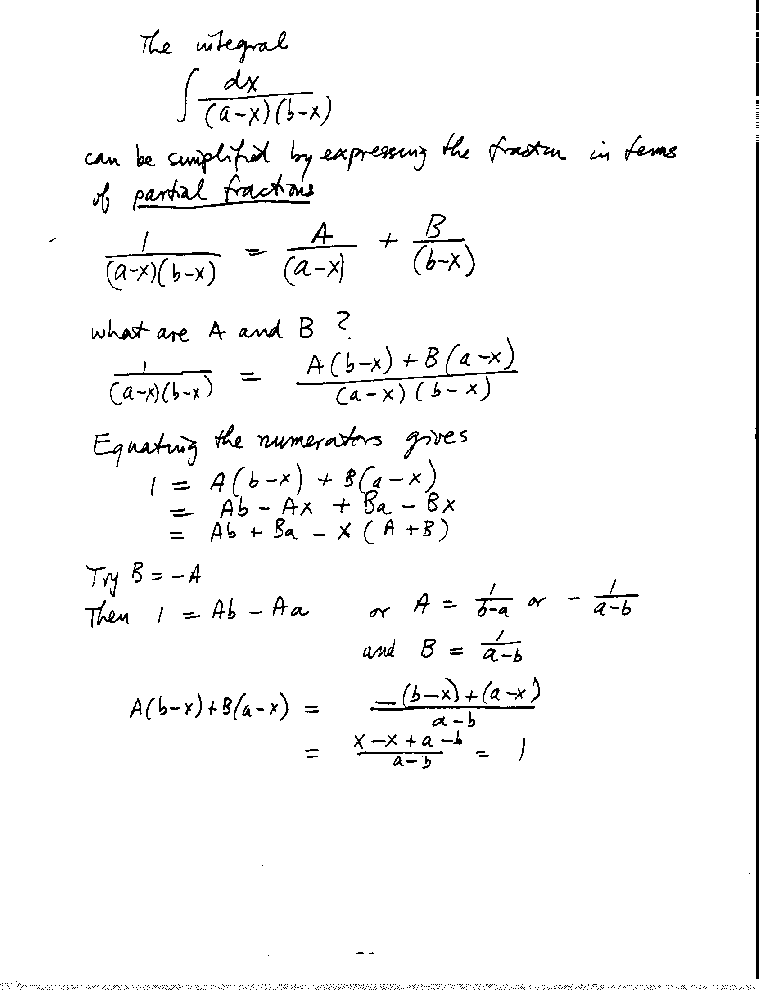
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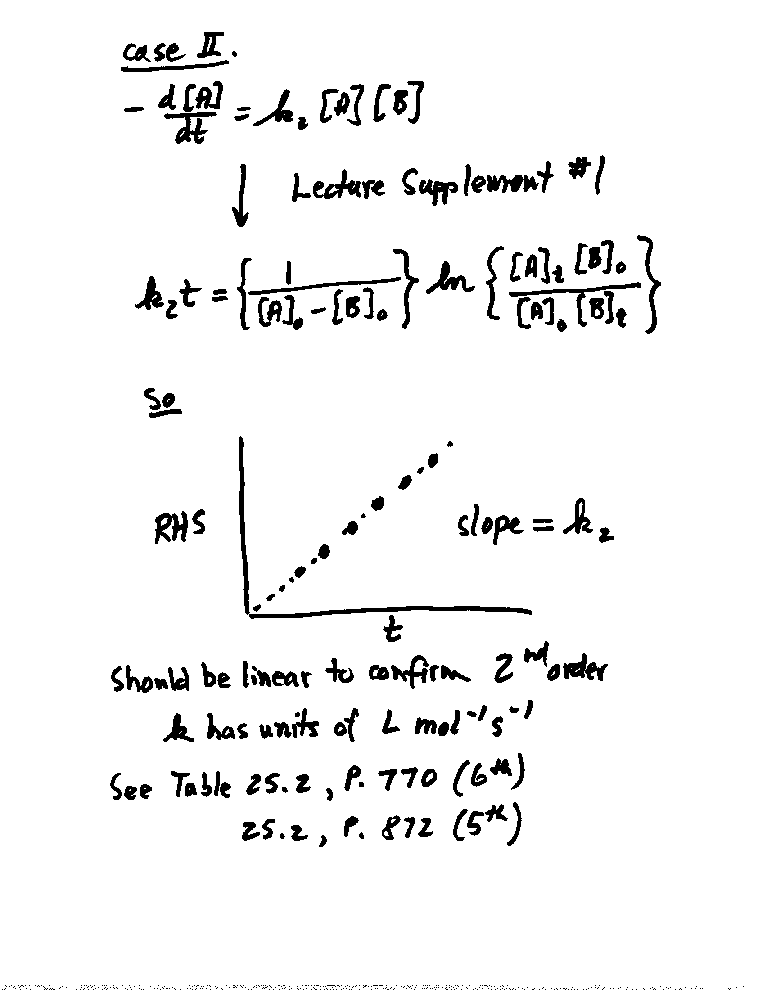
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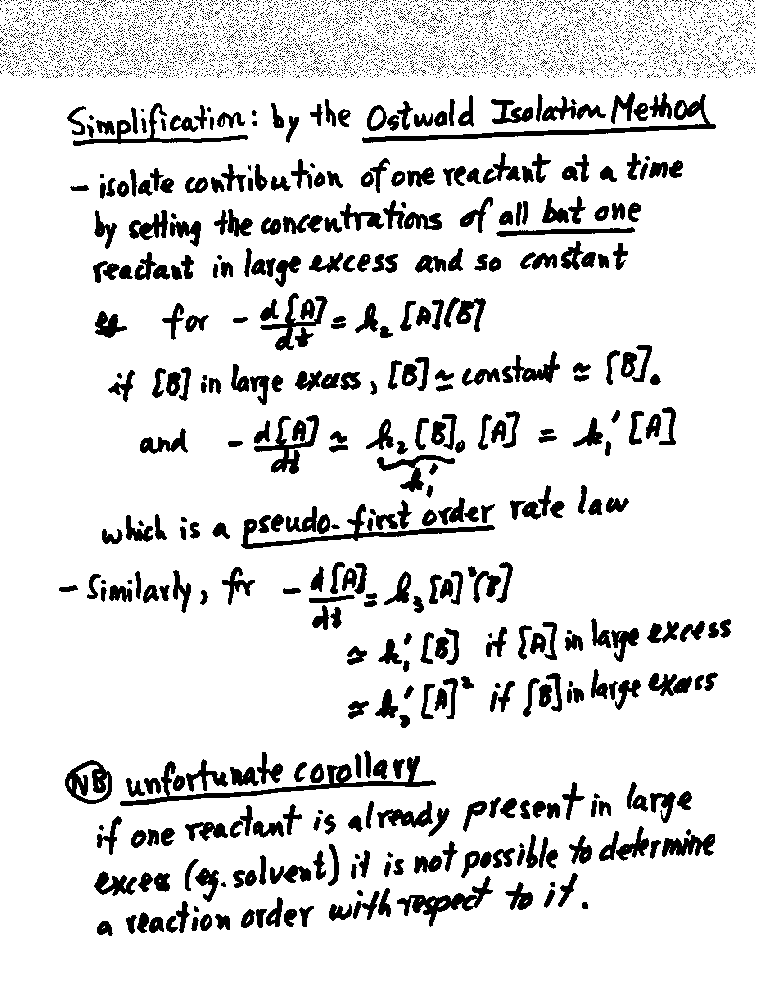
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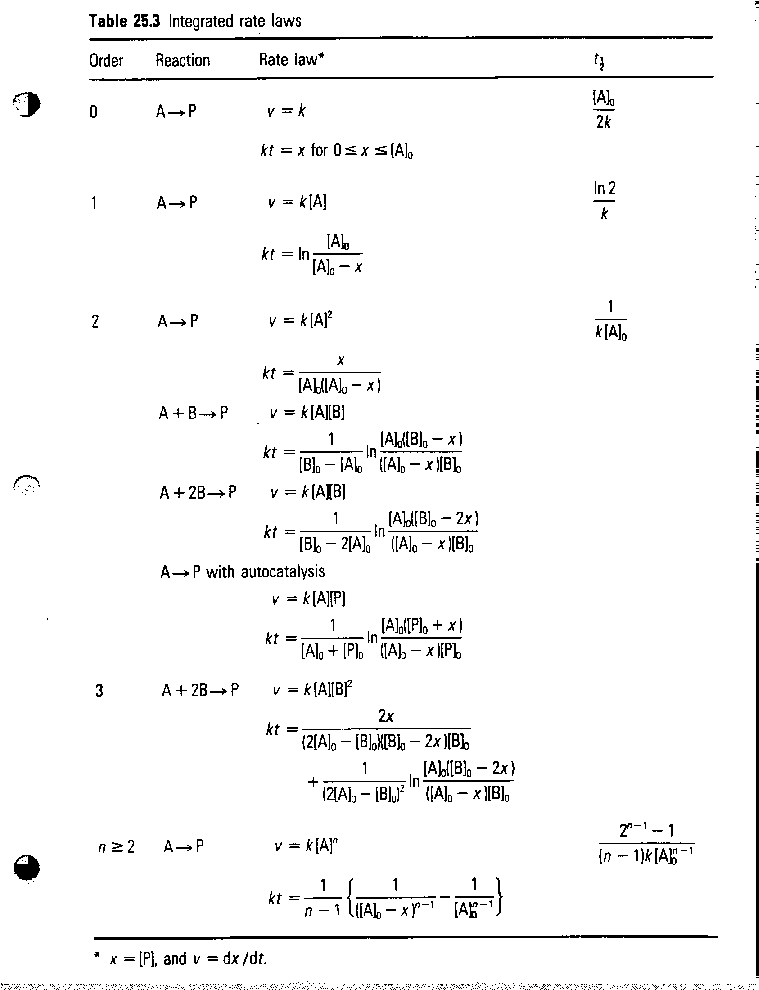
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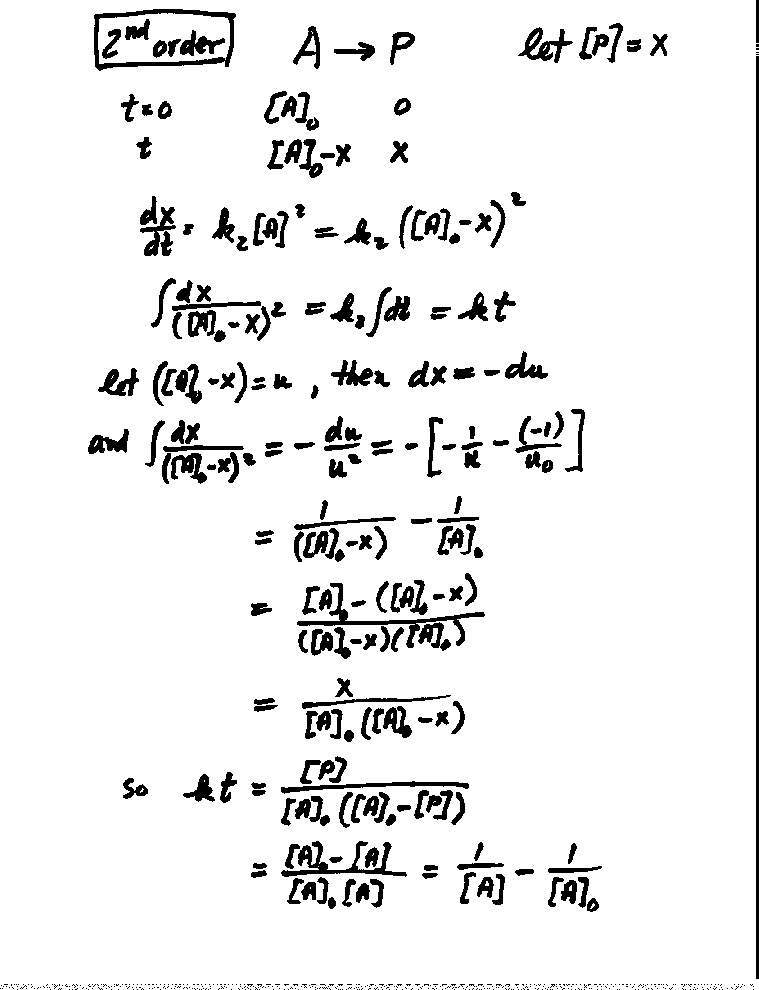
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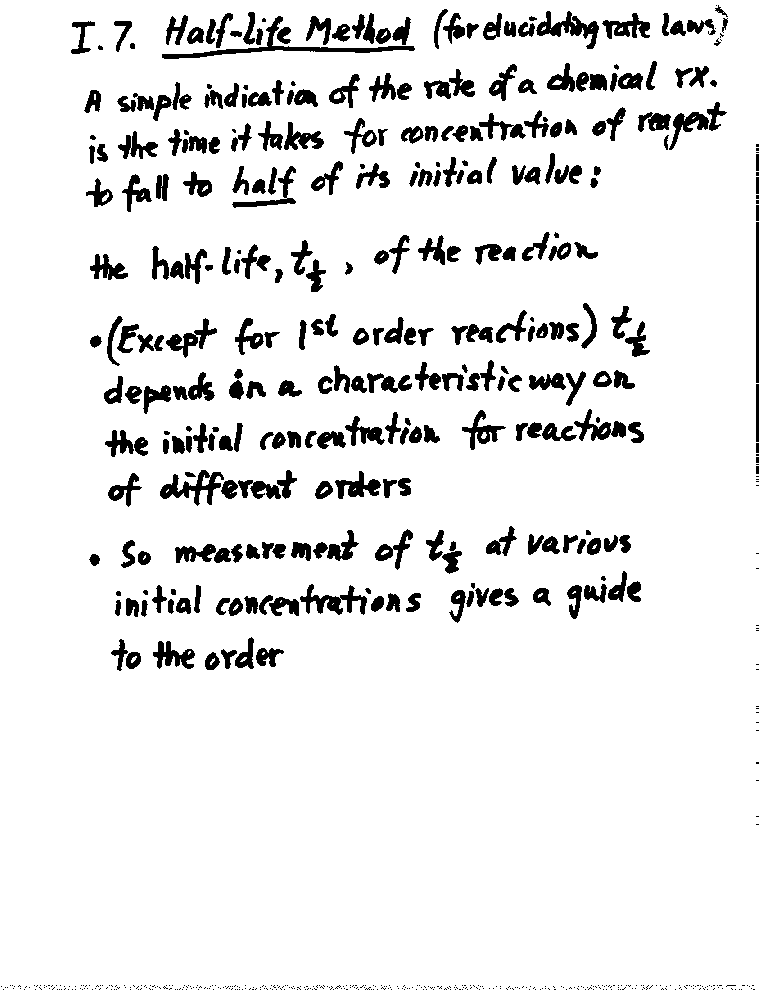
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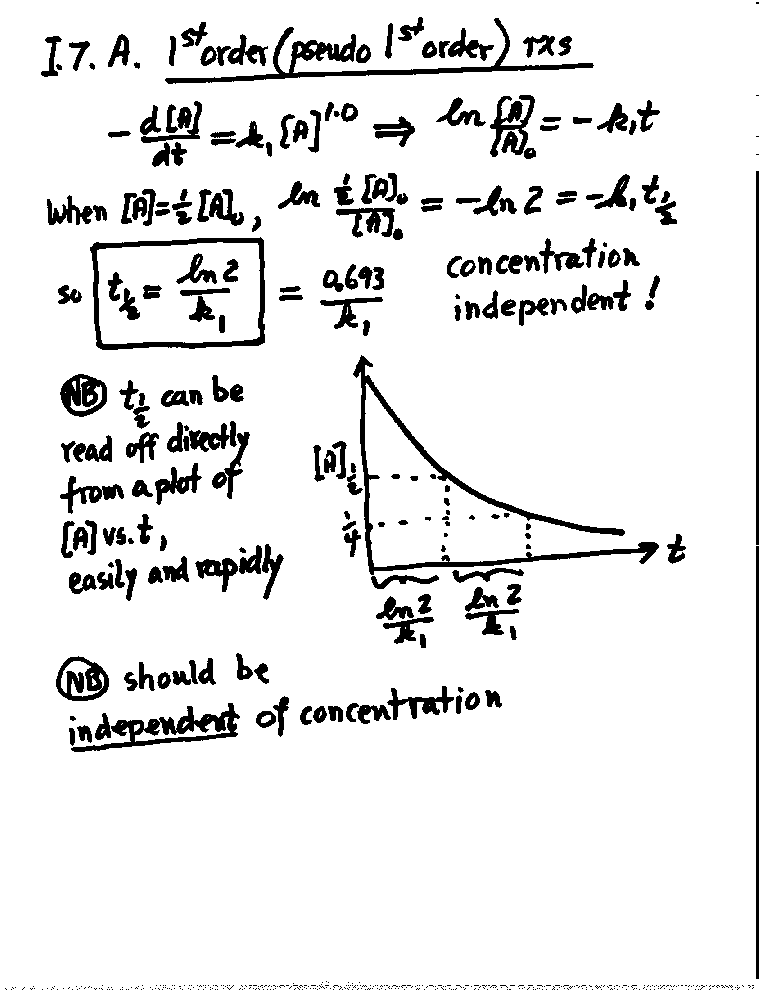
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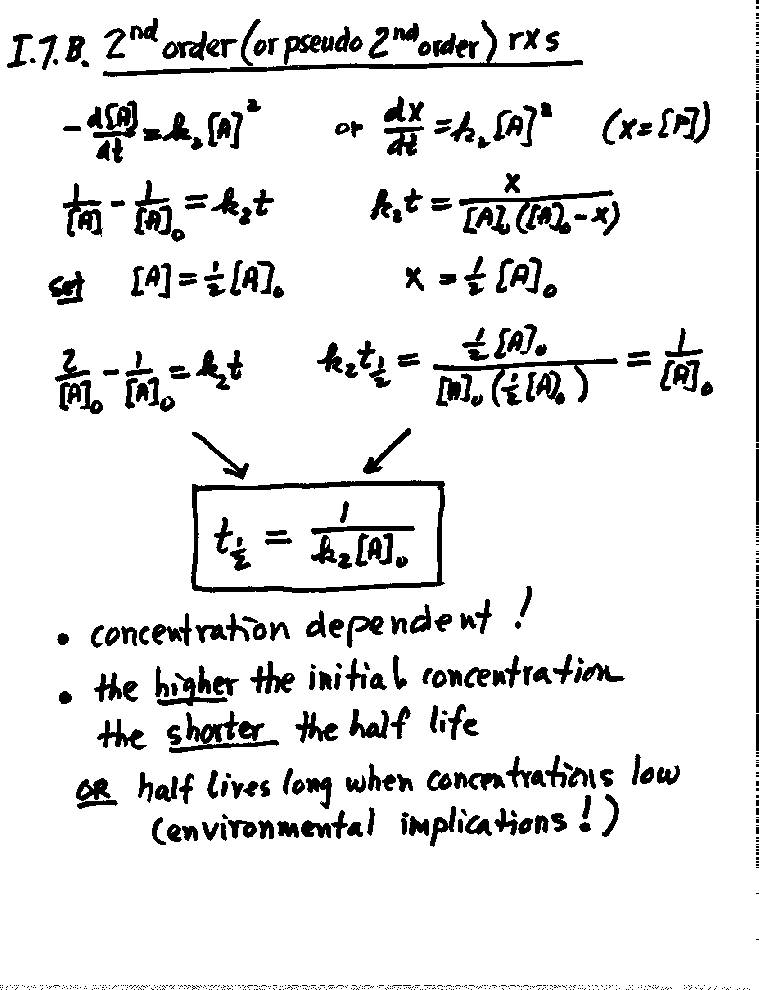
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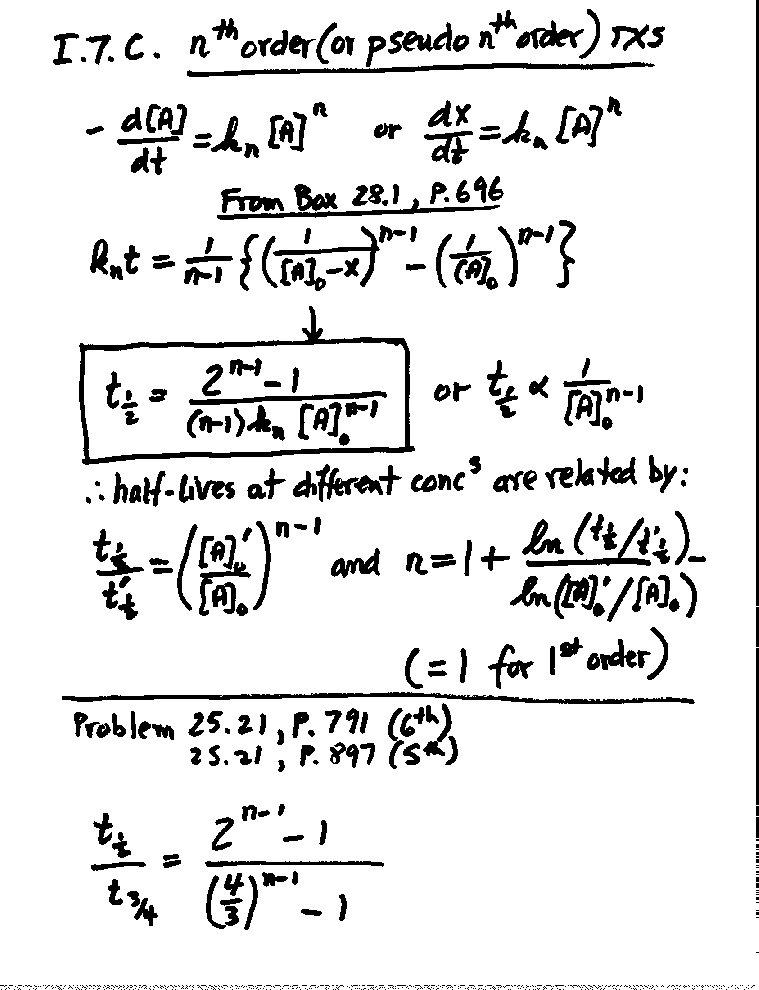
**LECTURE 4**

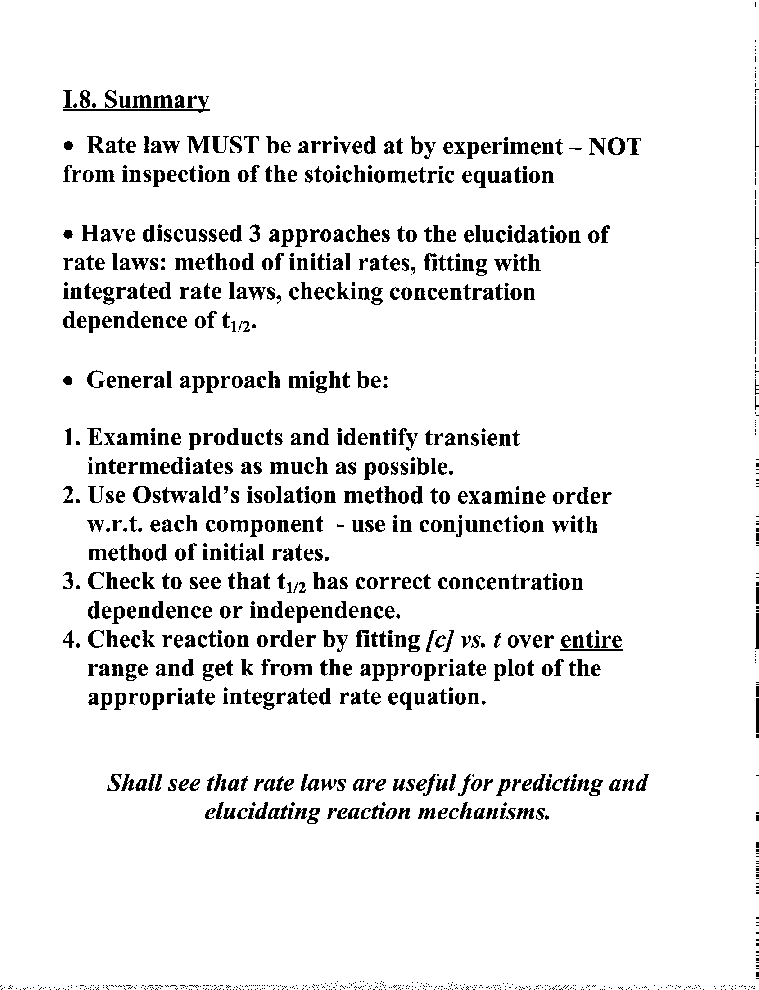
**HALF-LIFE METHOD**

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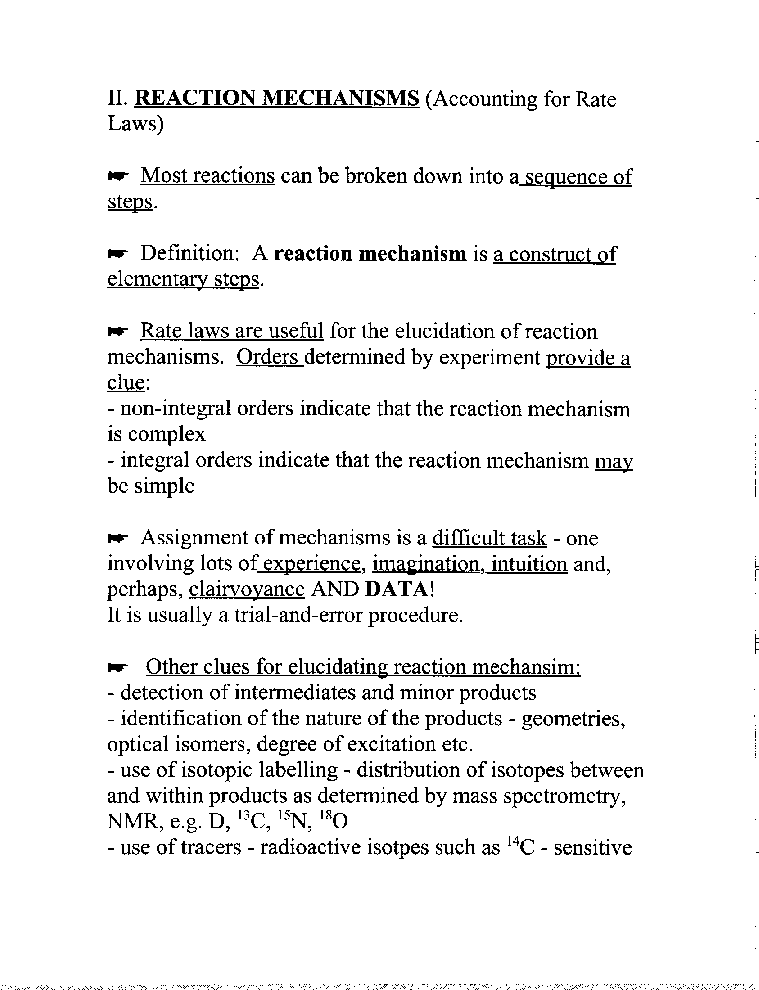
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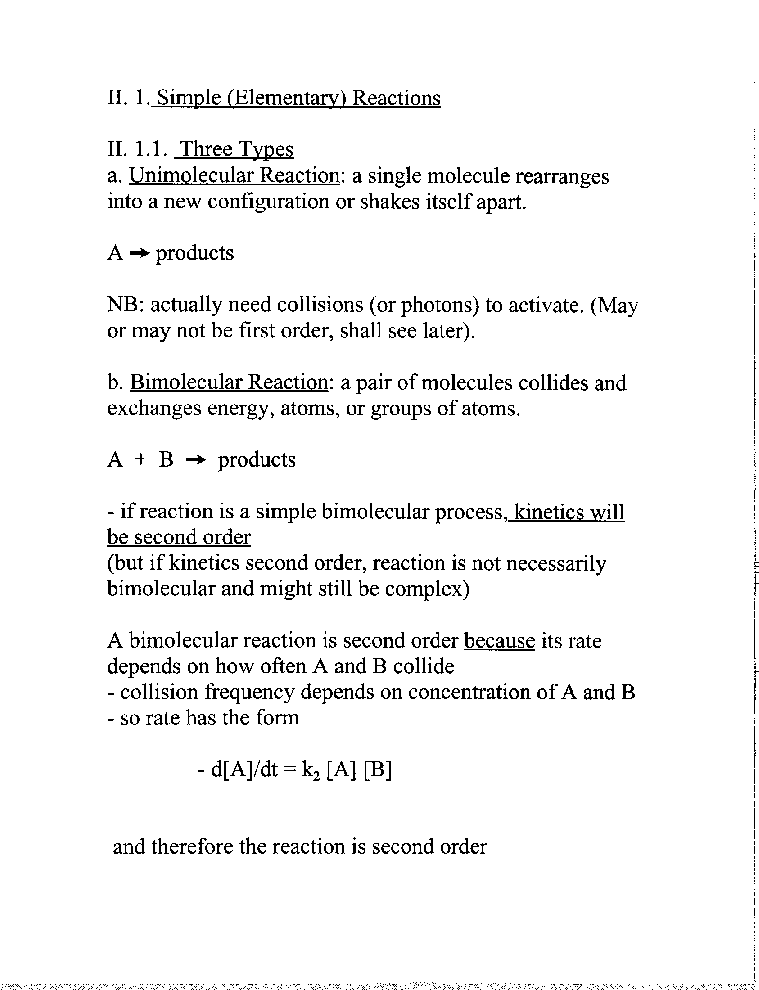
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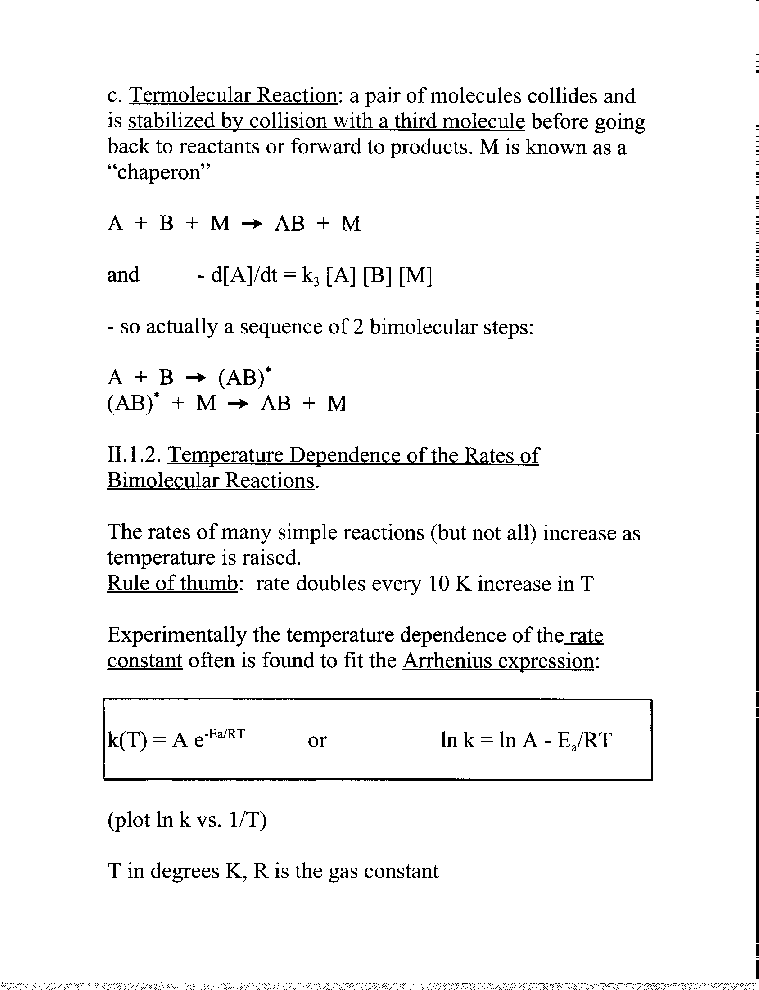
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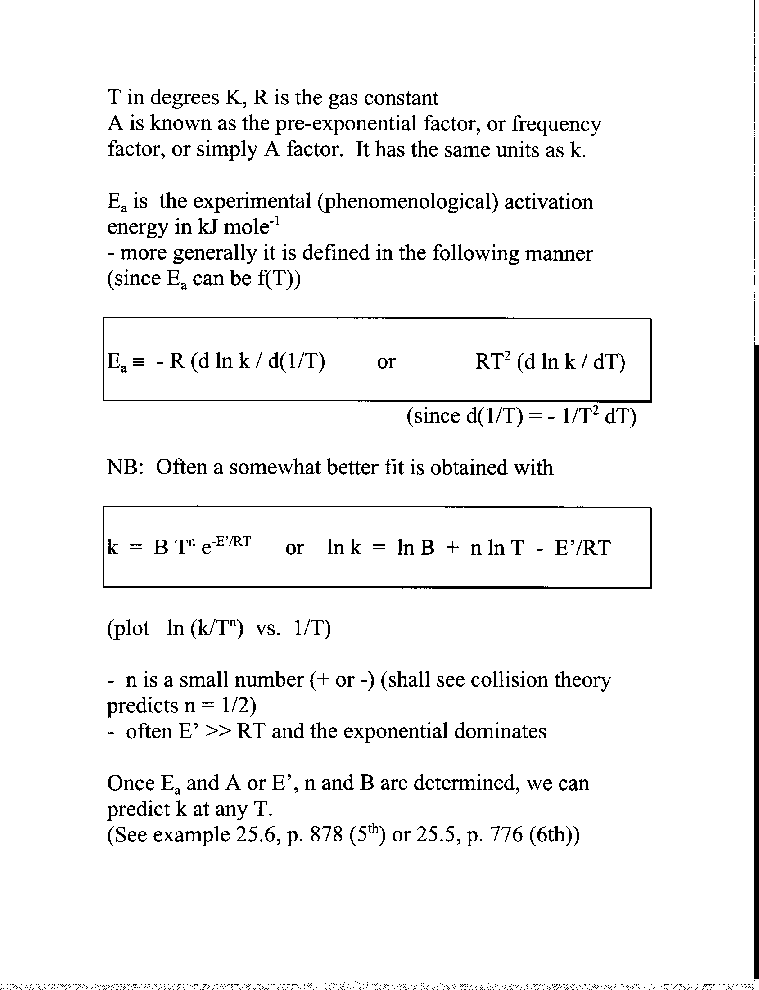
**LECTURE 5**

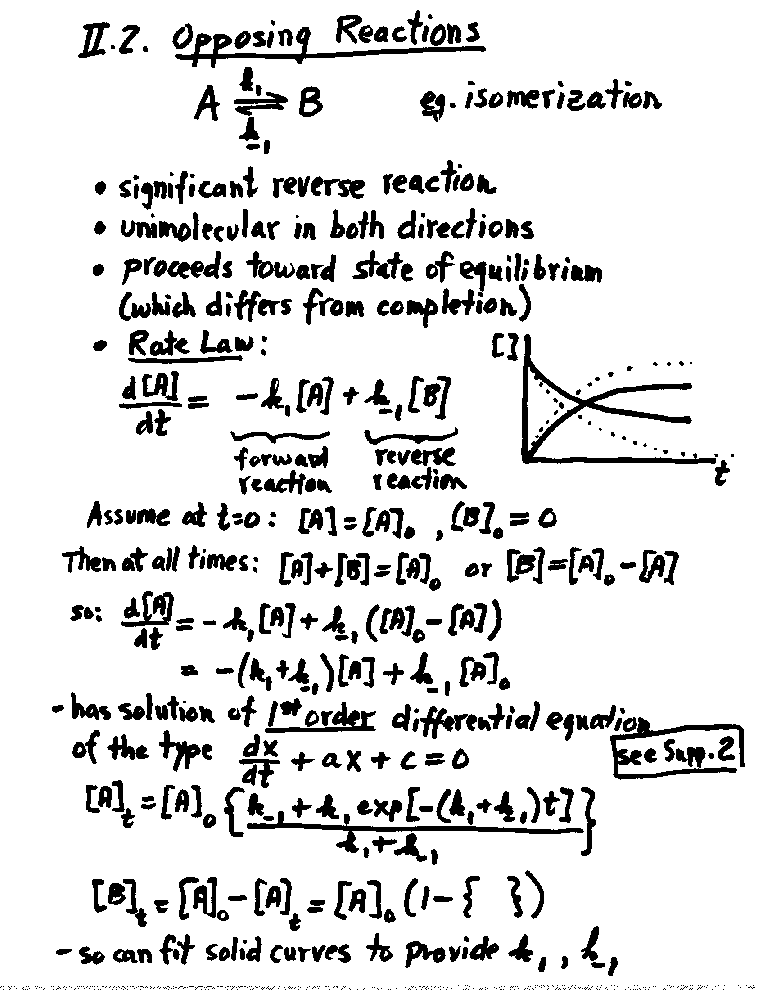
**REACTION MECHANISMS. ASSIGNMENT OF MECHANISM. SIMPLE (ELEMENTARY REACTIONS). OPPOSING REACTIONS**

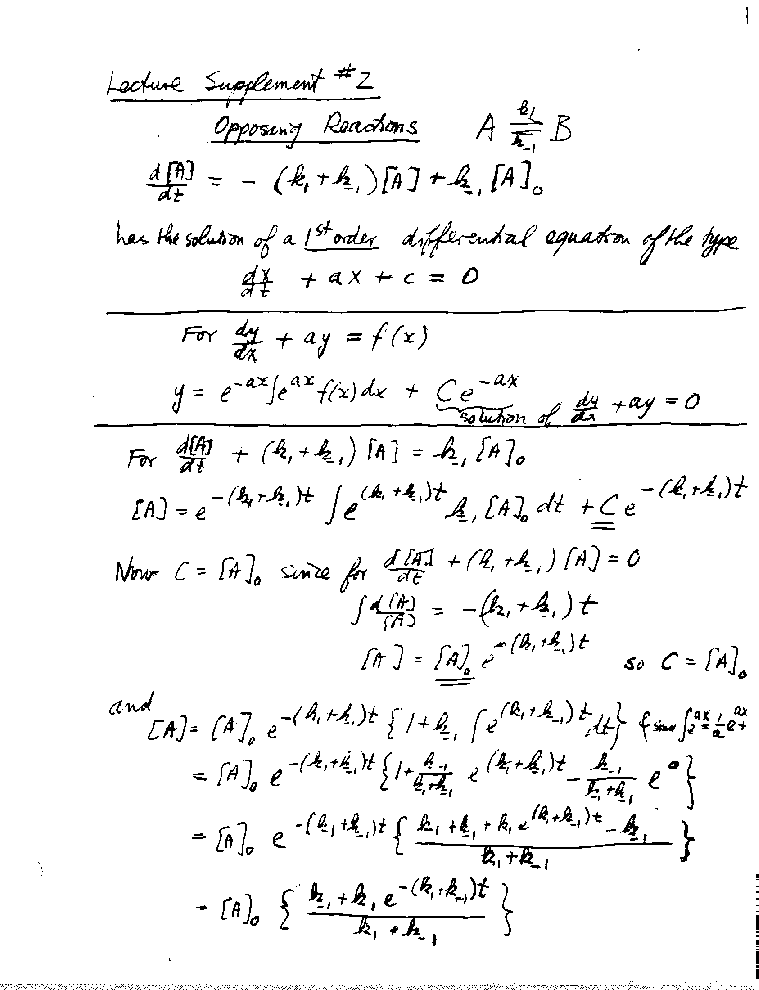
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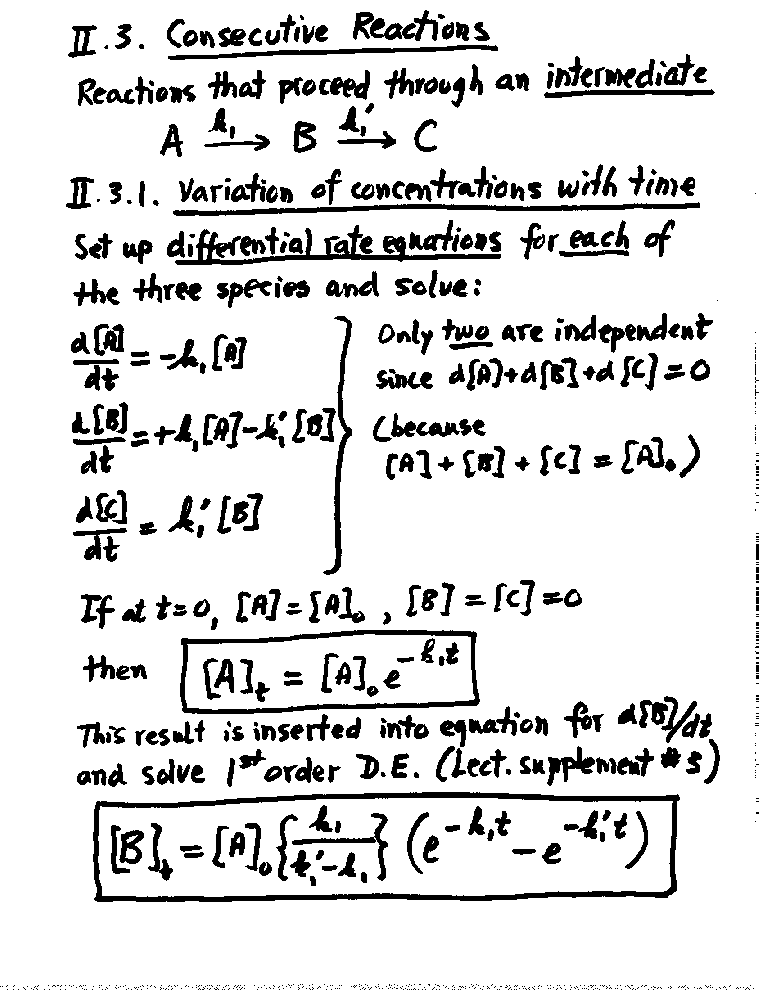
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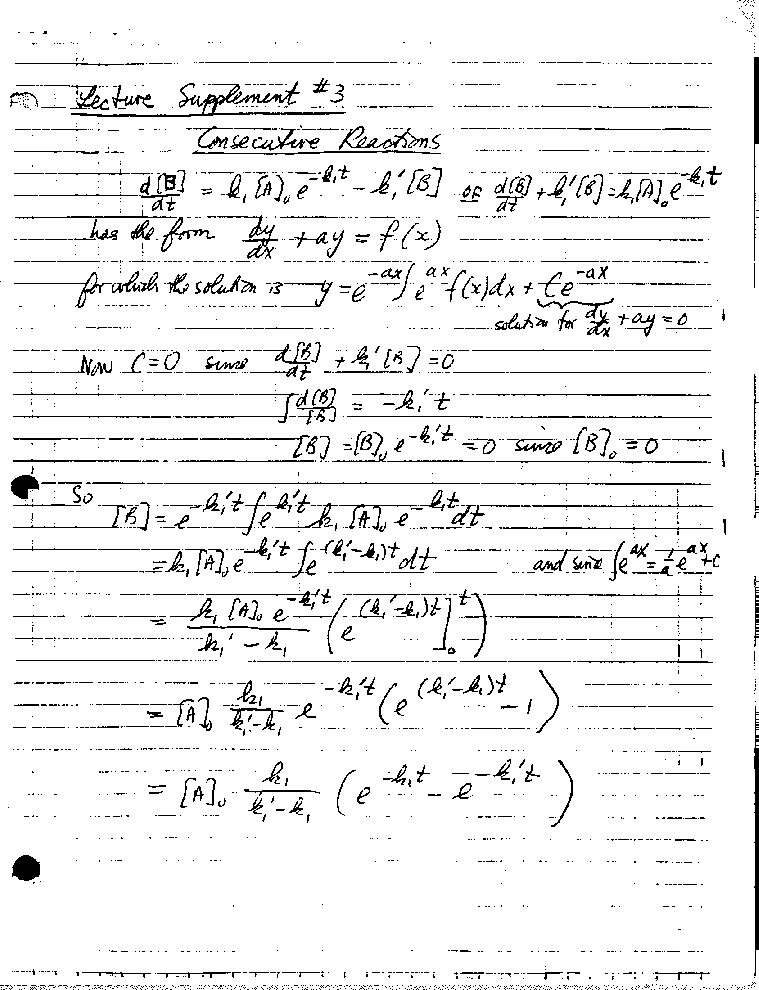
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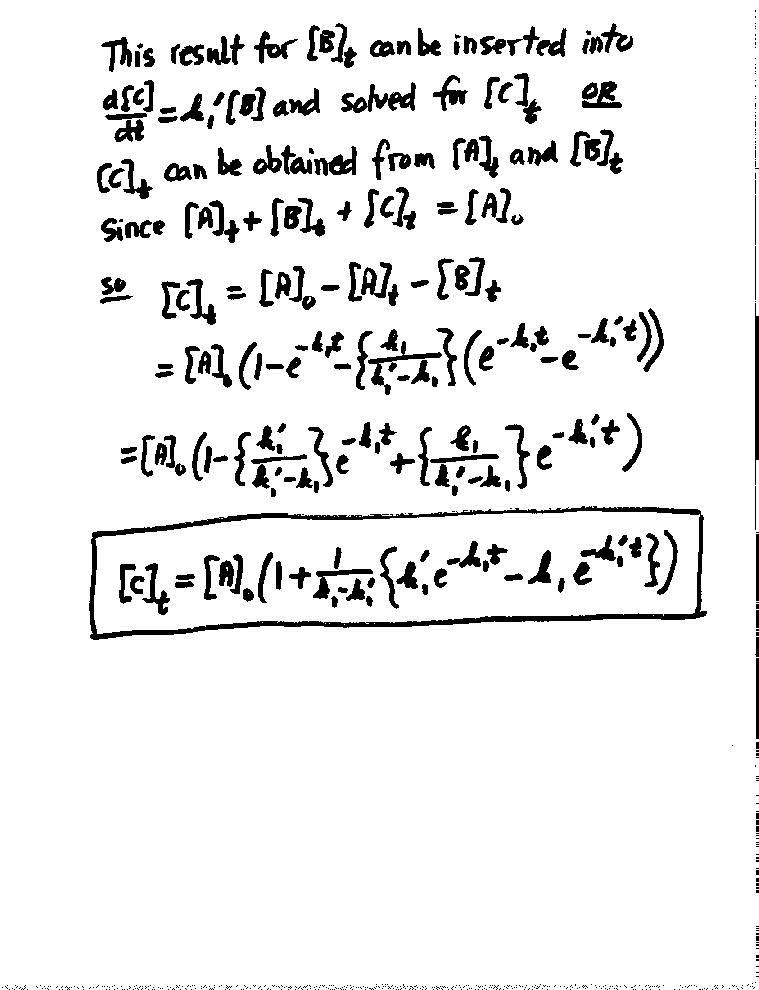
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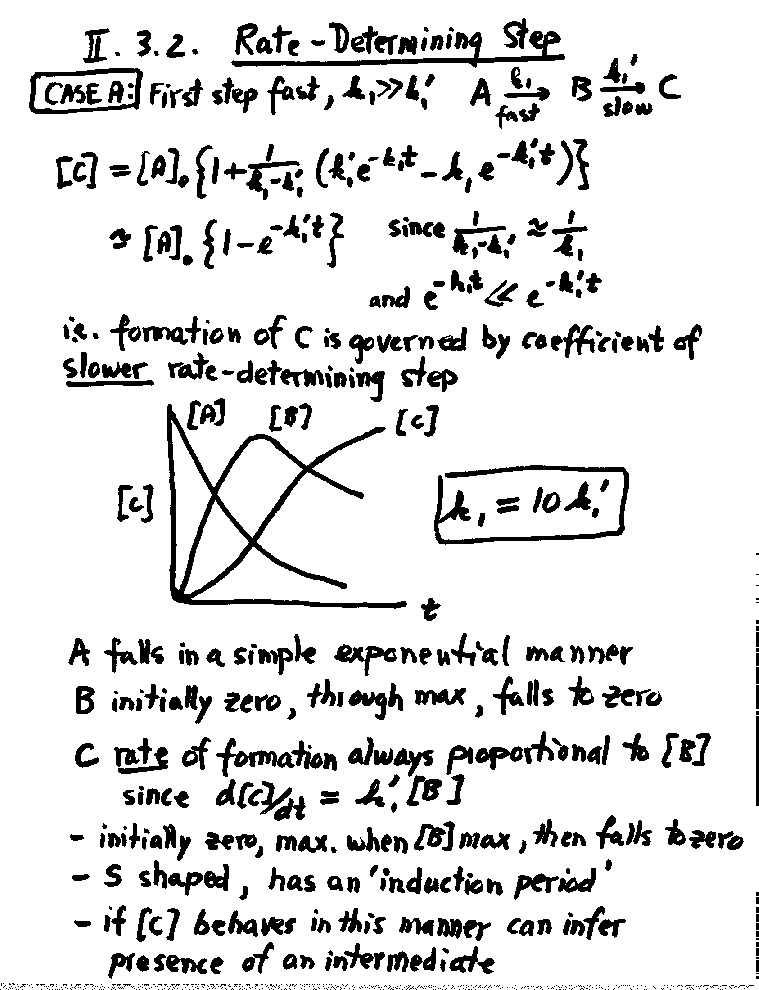
**LECTURE 6**

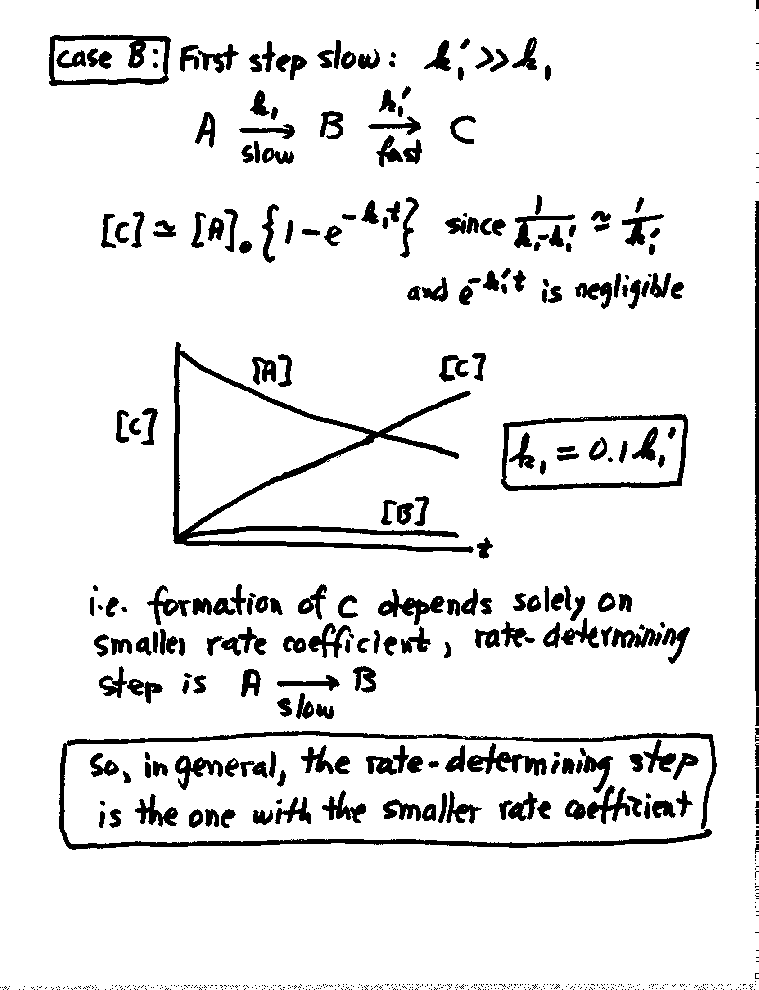
**CONSECUTIVE REACTIONS. VARIATIONS OF CONCENTRATIONS WITH TIME .  RATE-DETERMINING STEP.  STEADY-STATE APPROXIMATION. PRE-EQUILIBRIUM**

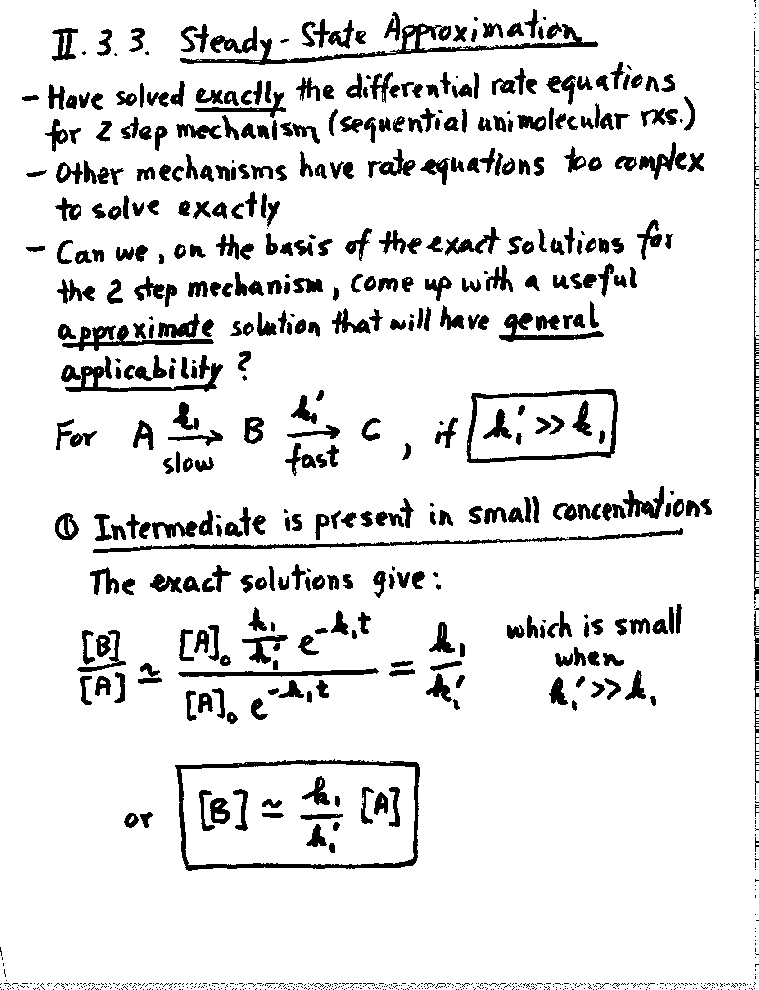
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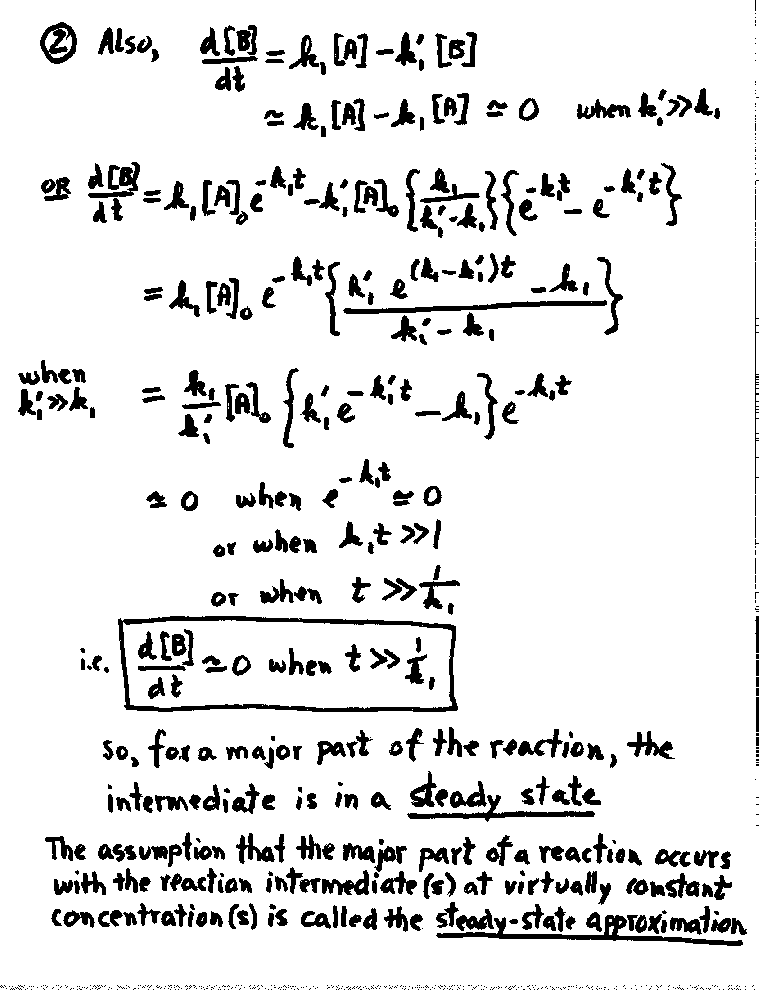
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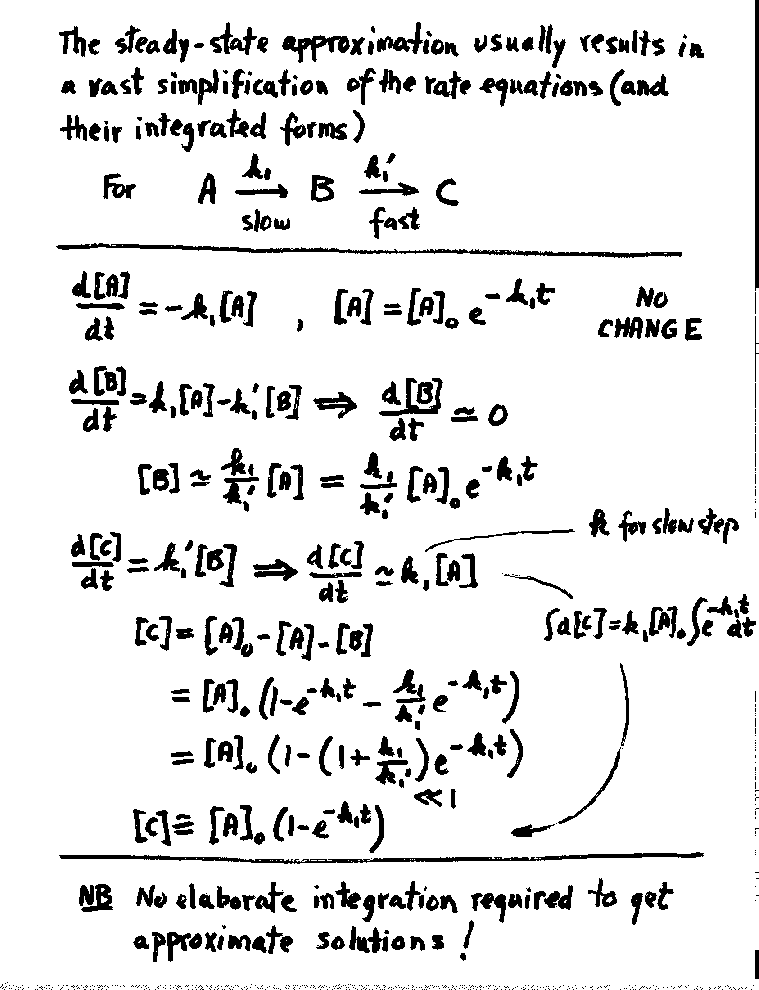
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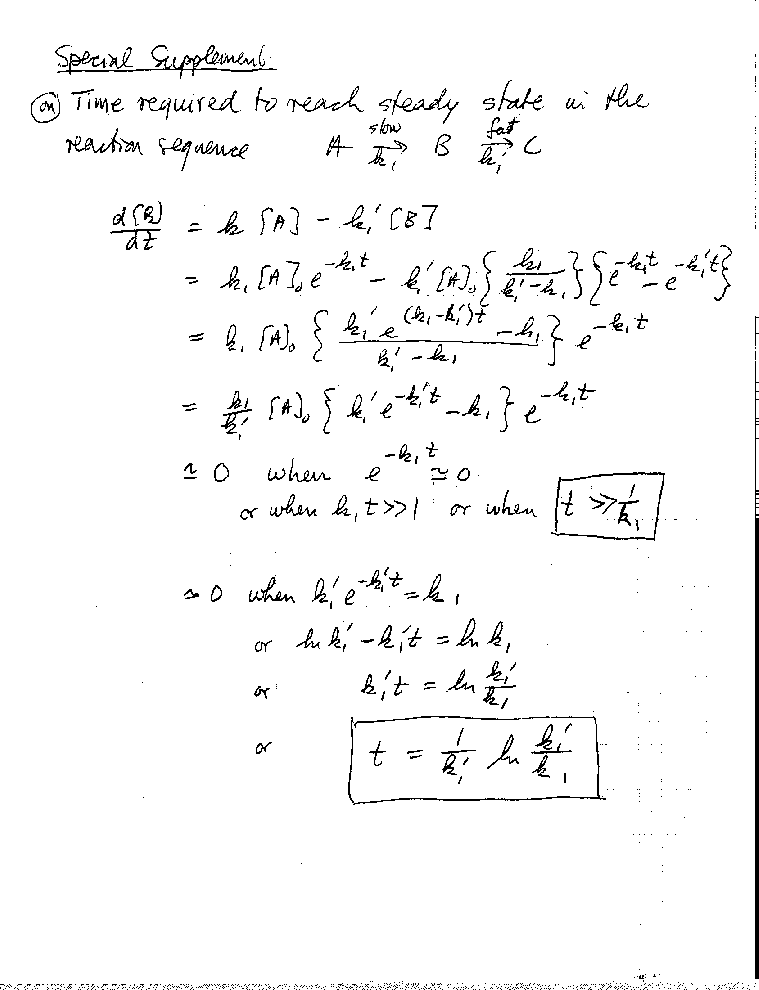
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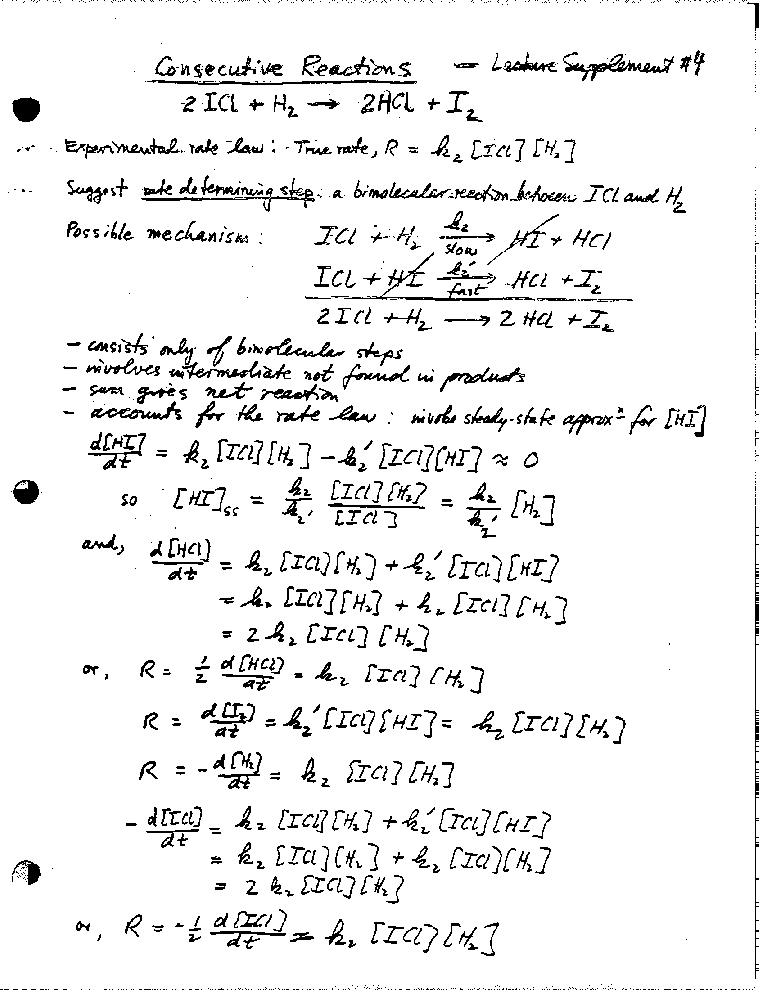
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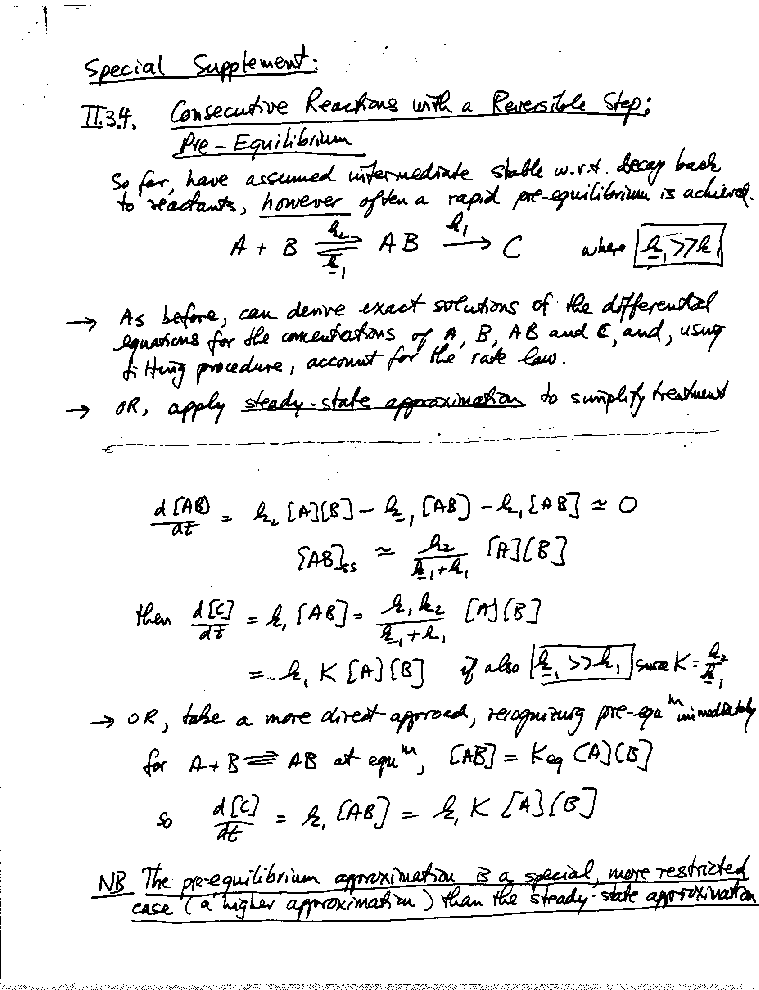
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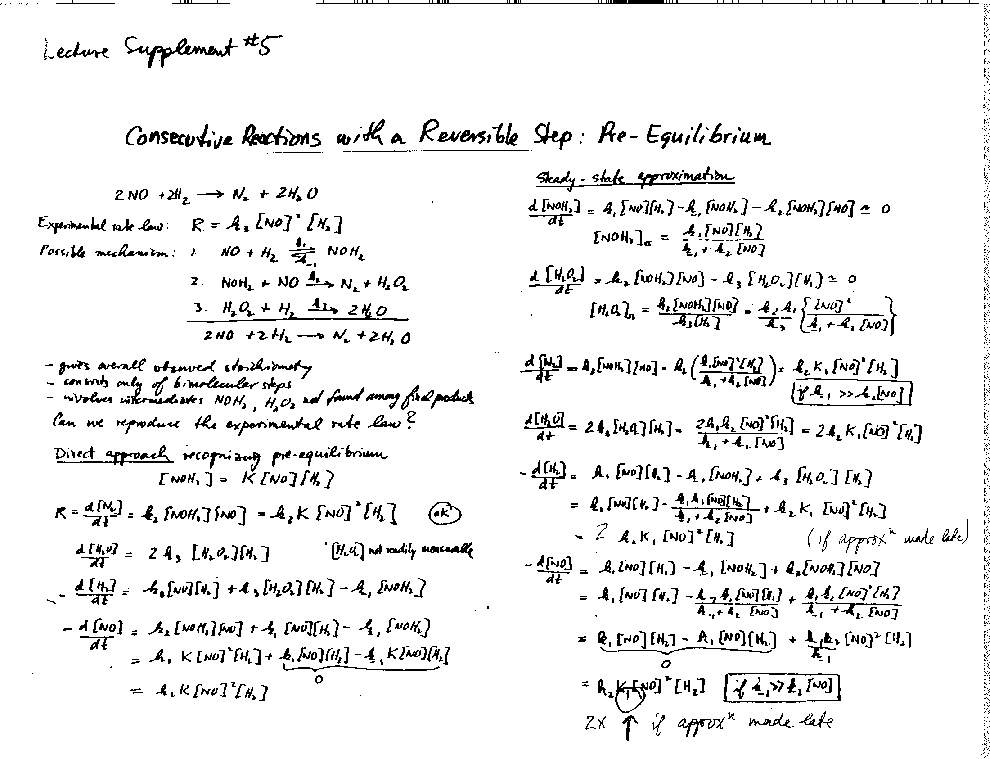
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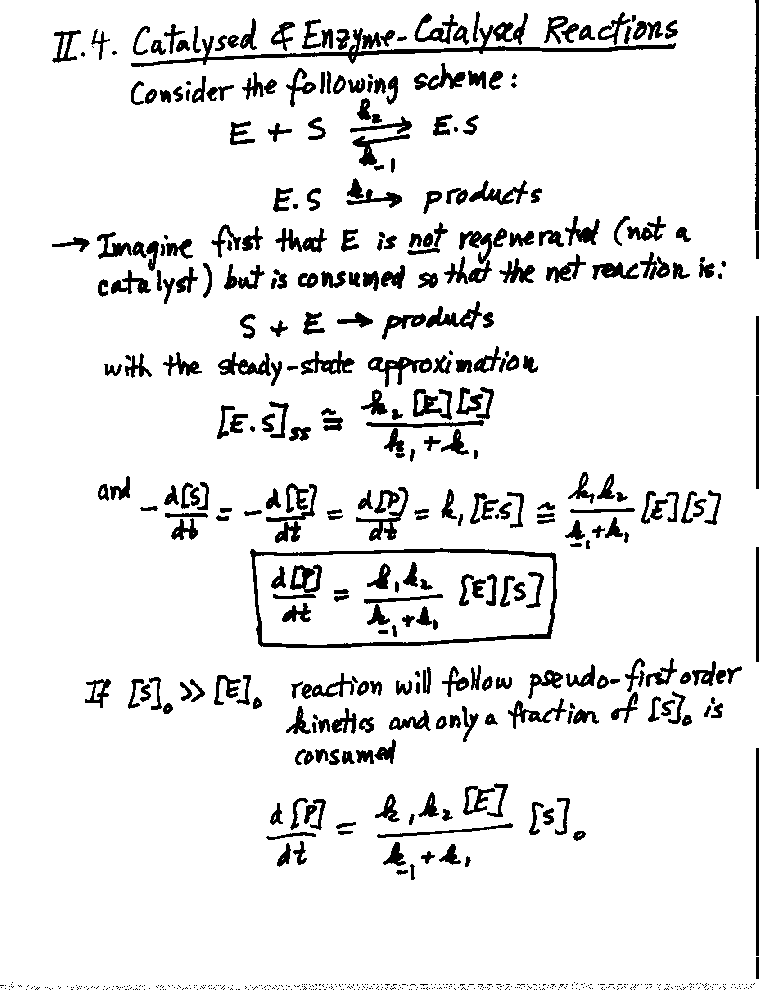
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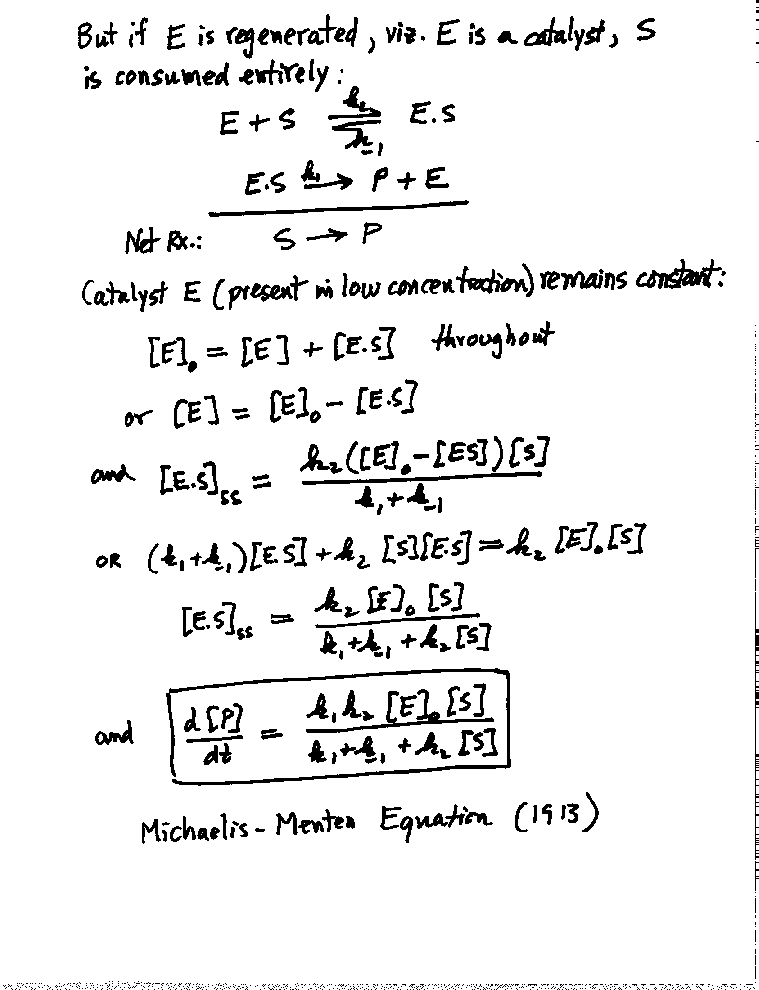
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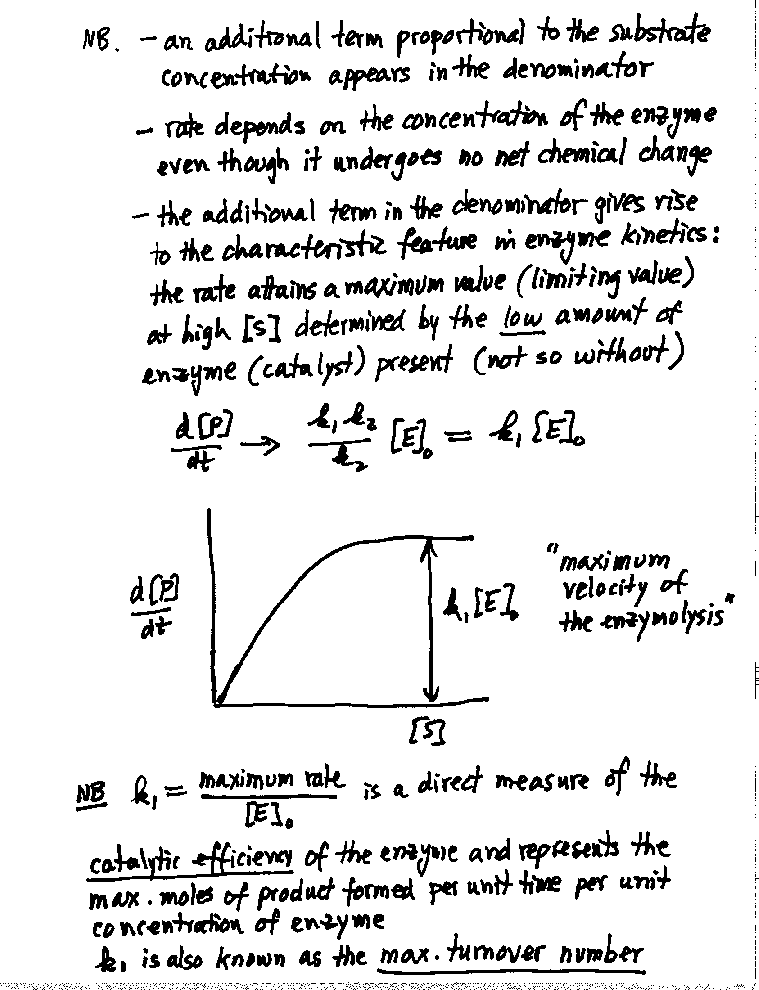
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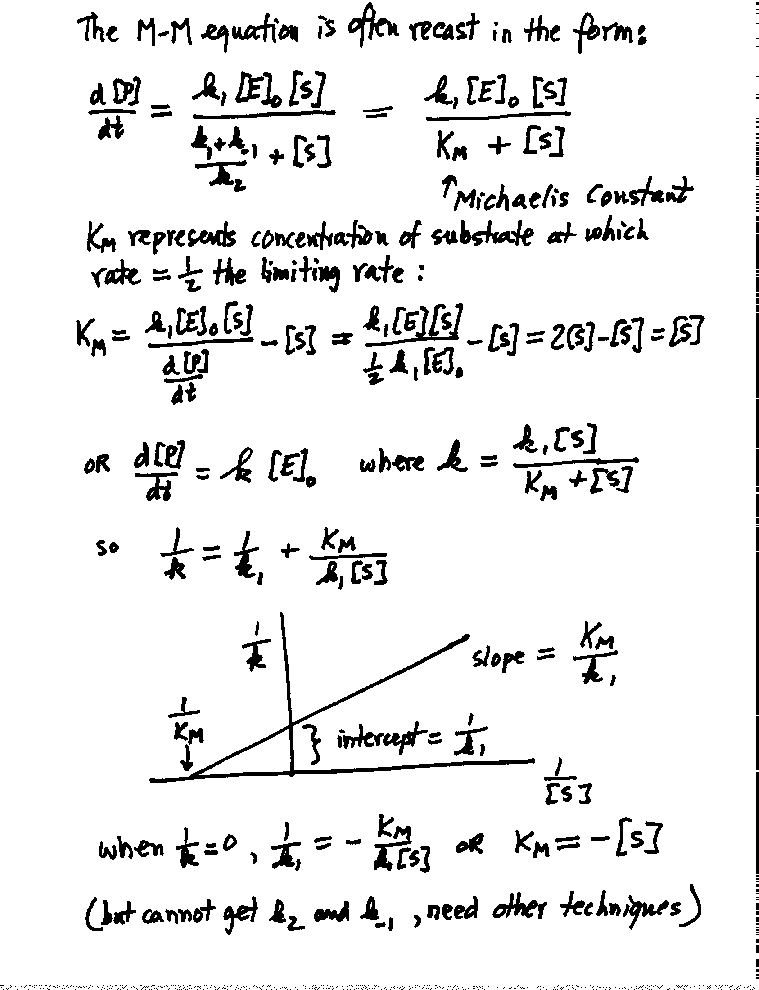
**LECTURE 7**

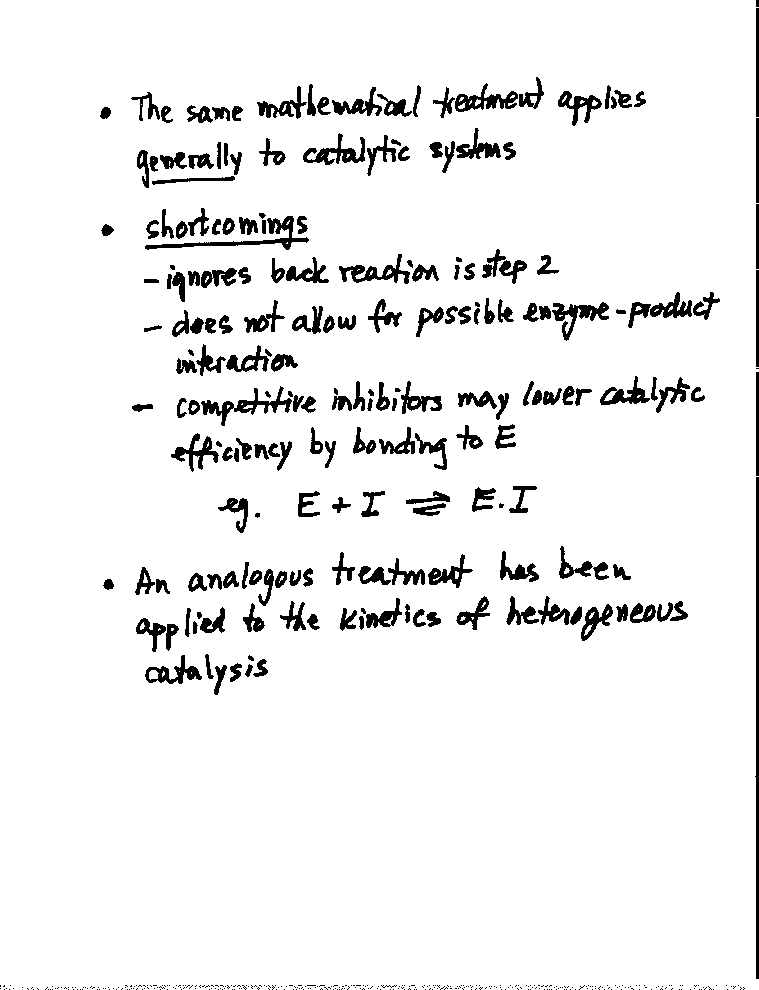
**CATALYSED AND ENZYME-CATALYSED REACTIONS. UNIMOLECULAR REACTIONS**

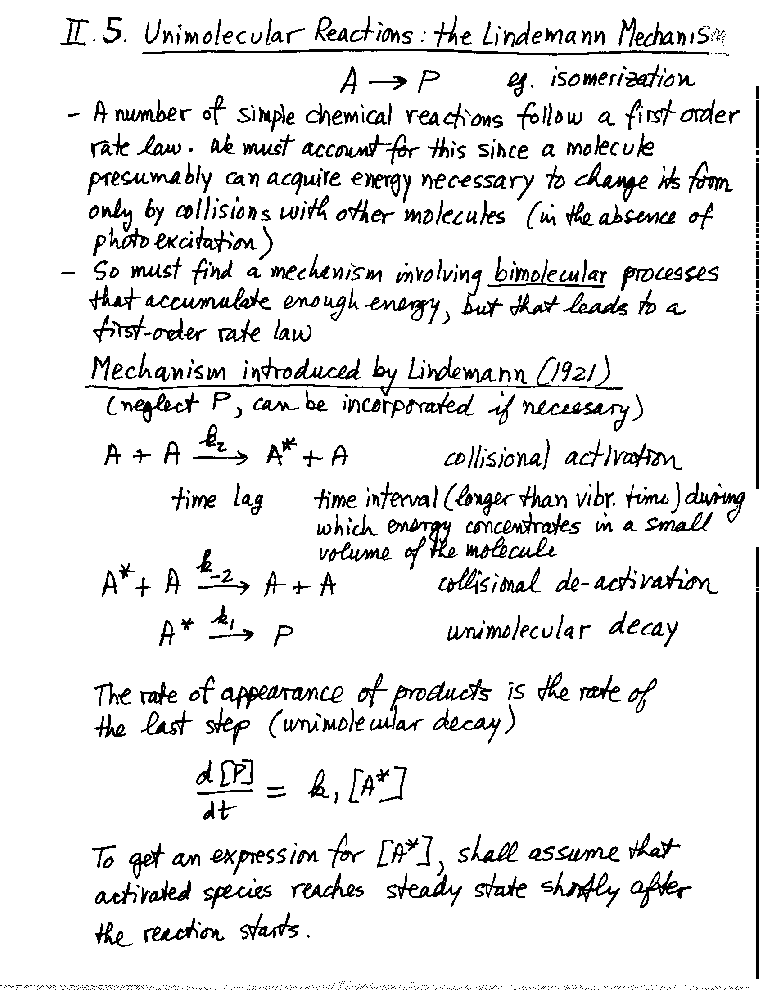
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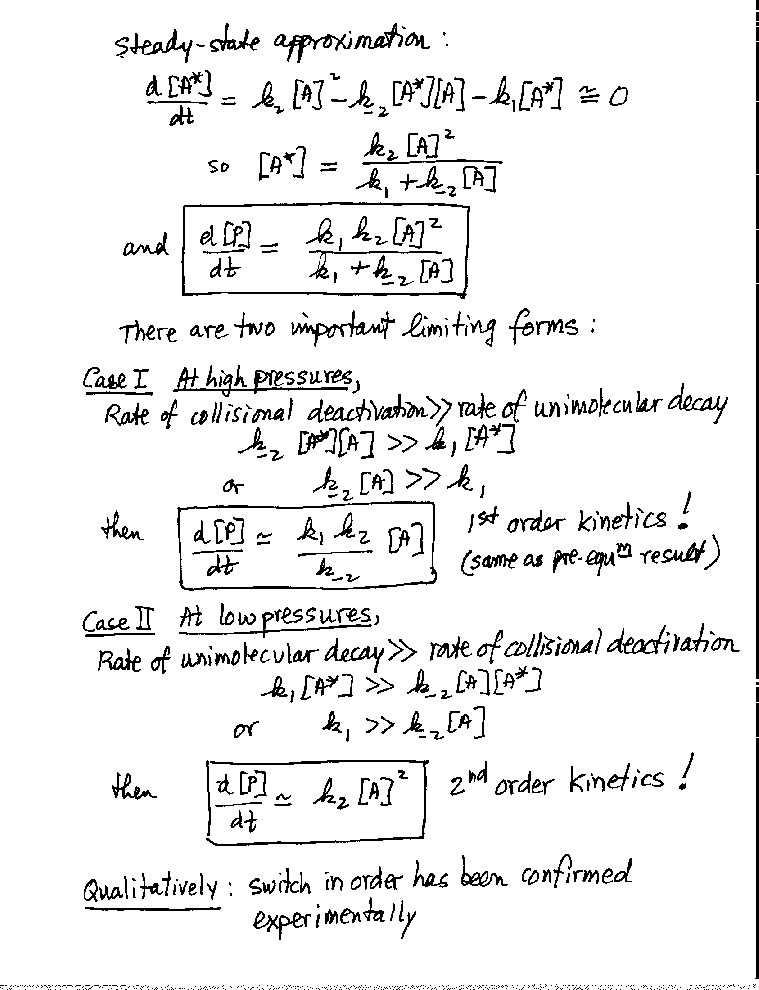
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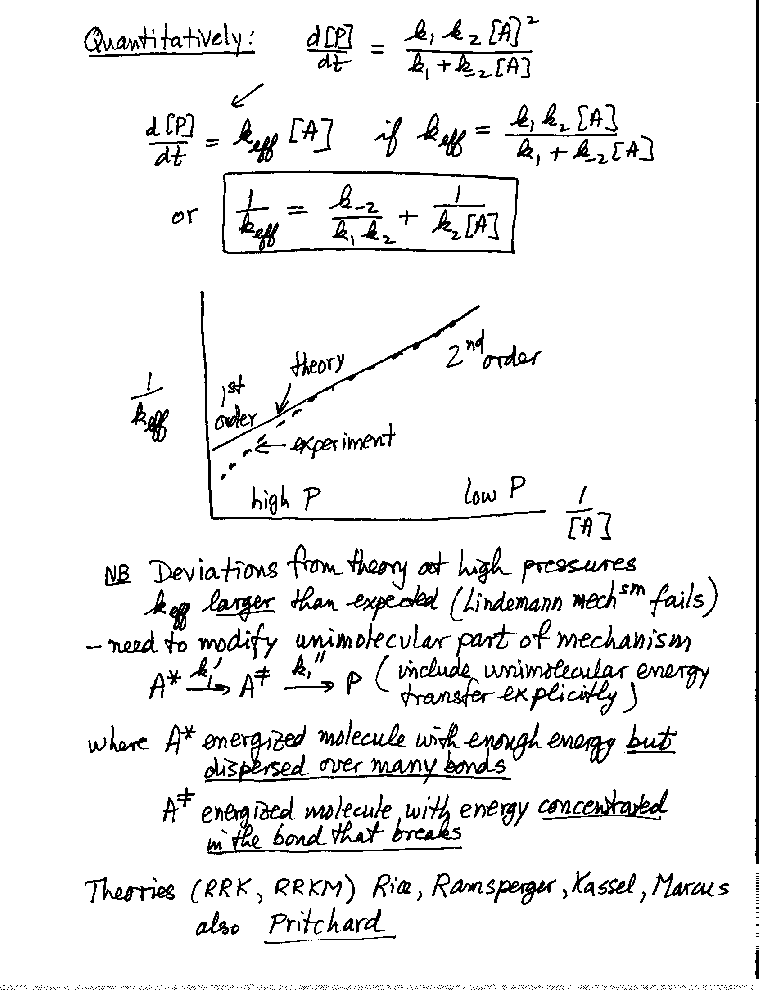
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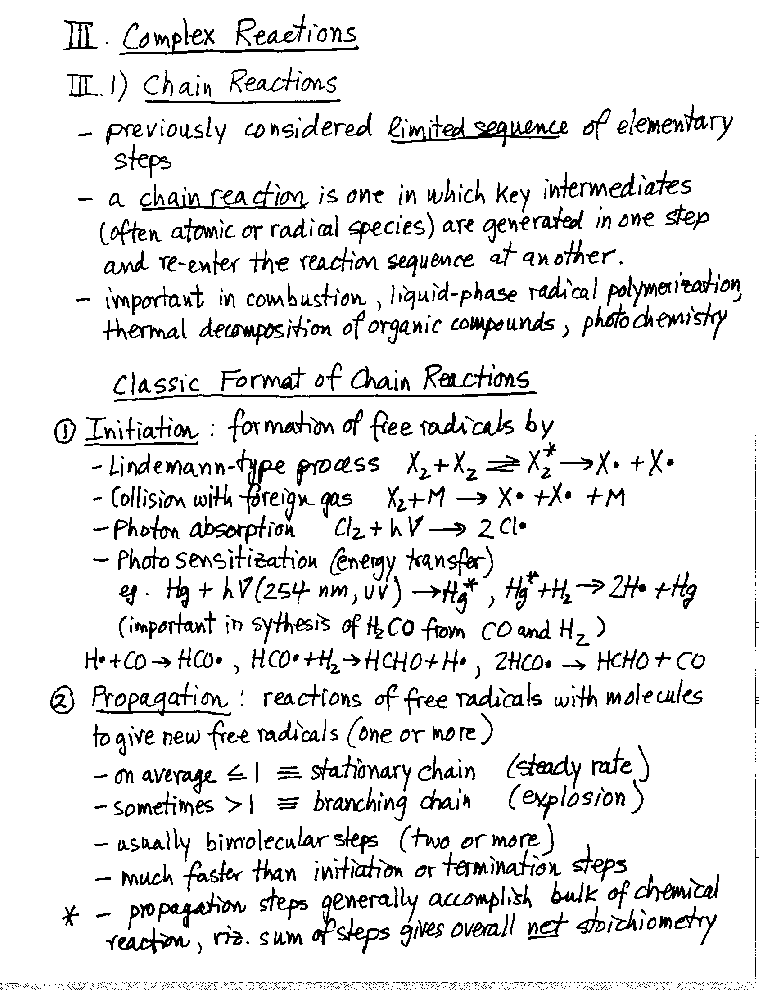
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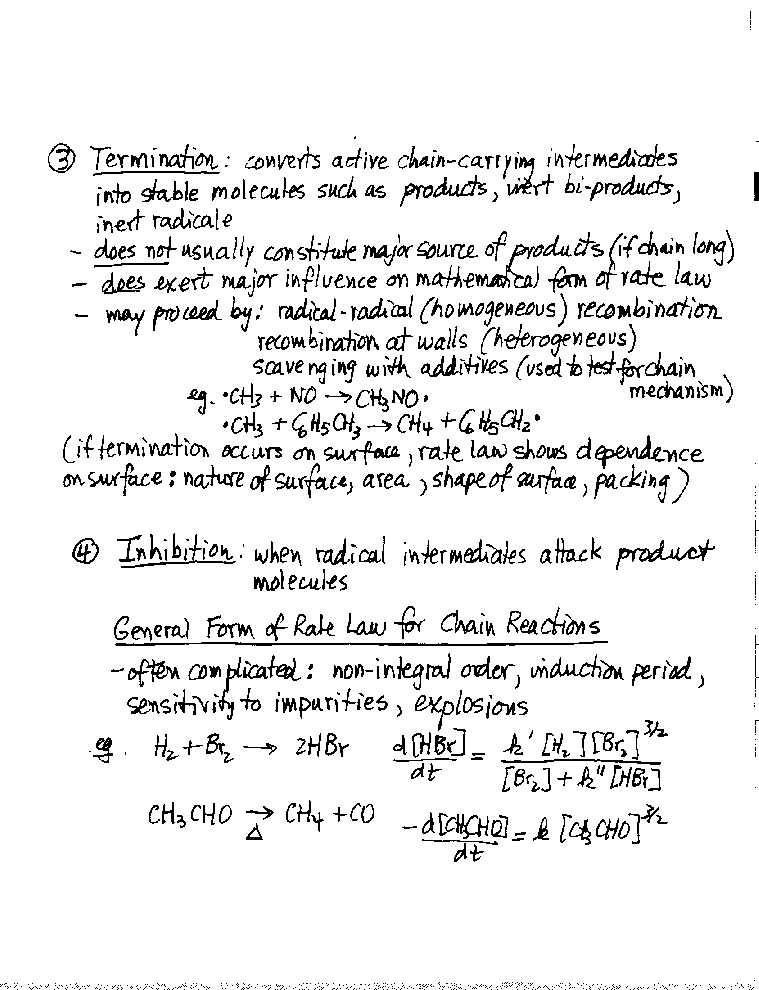
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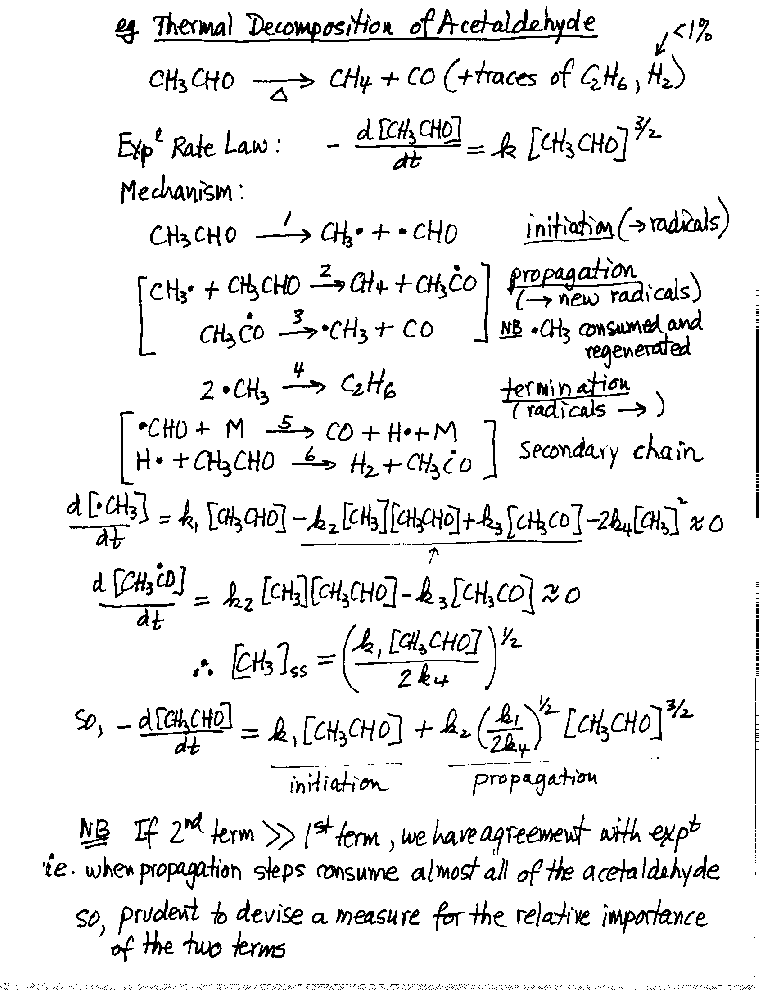
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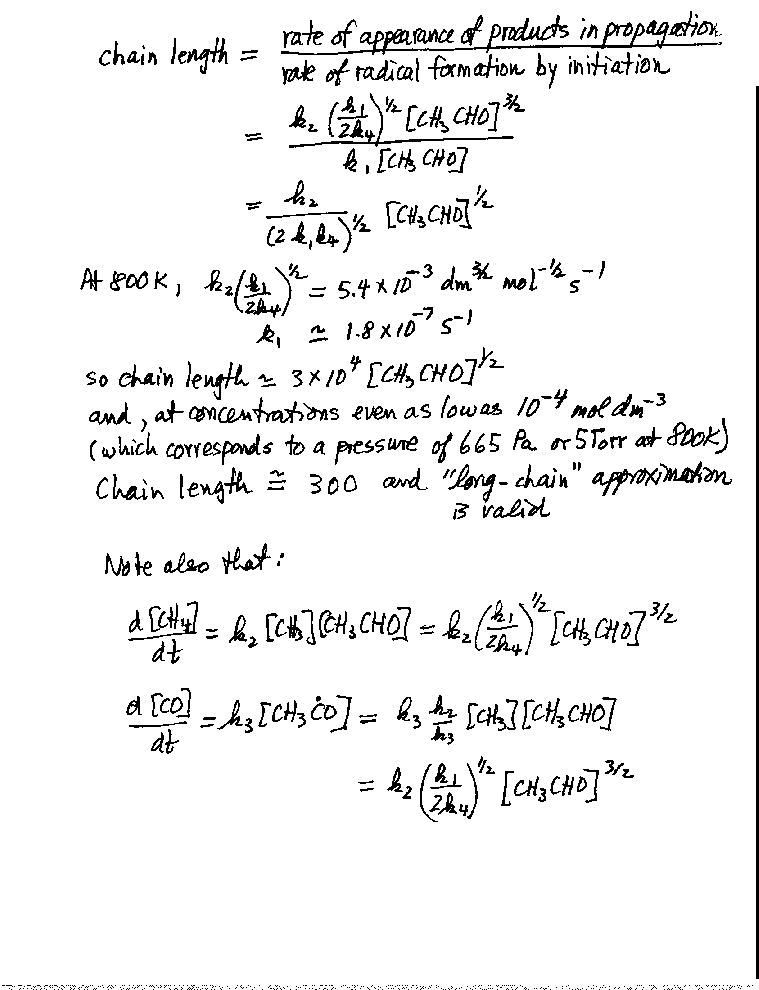
**LECTURE 8**

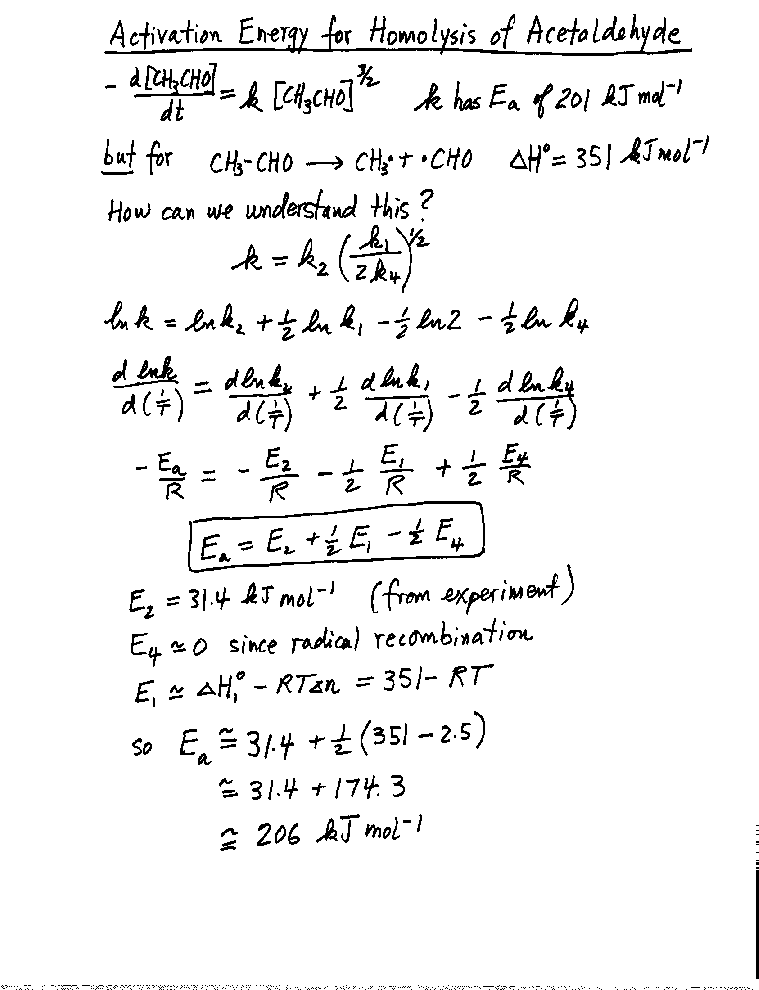
**COMPLEX REACTIONS. CHAIN REACTIONS. EXPLOSIONS**

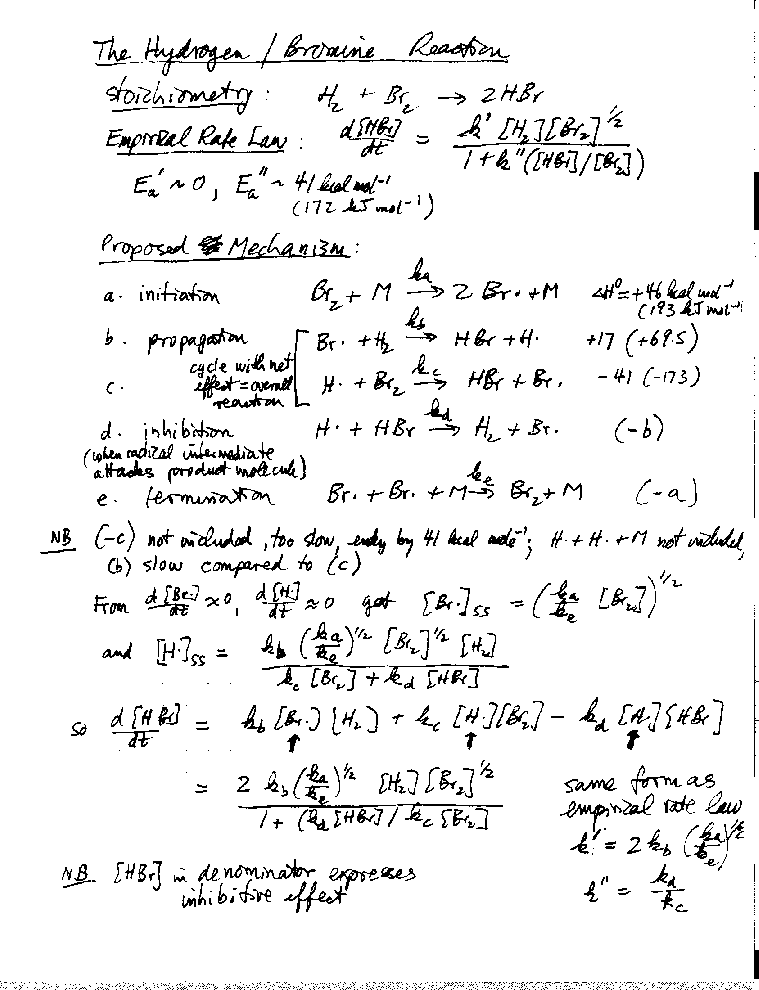
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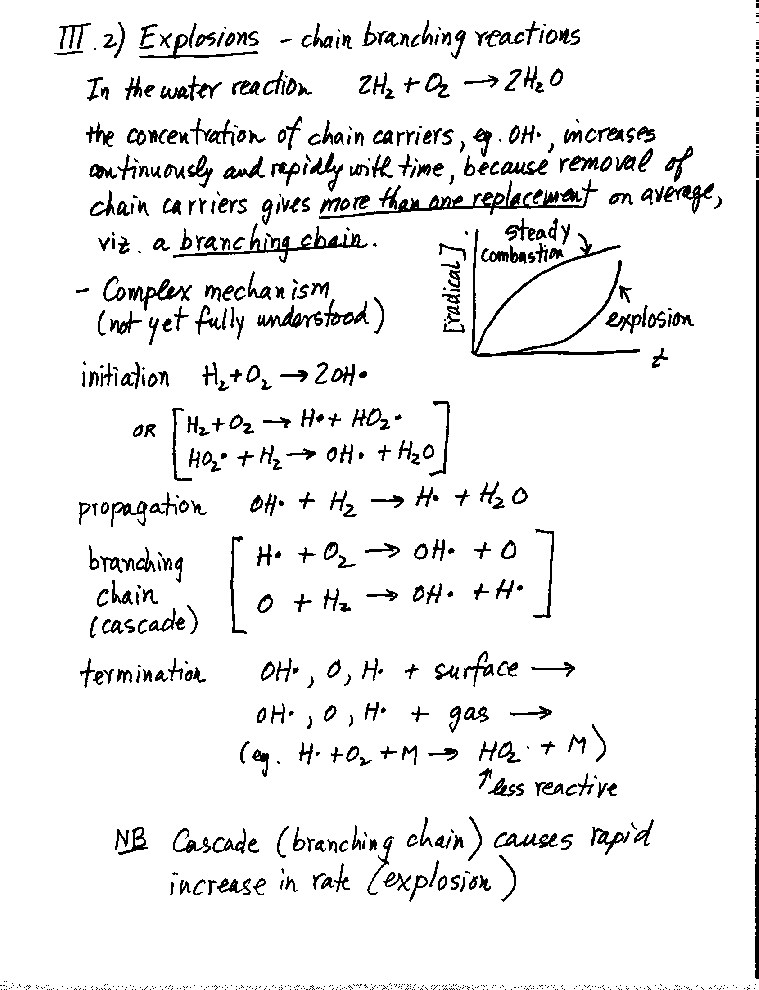
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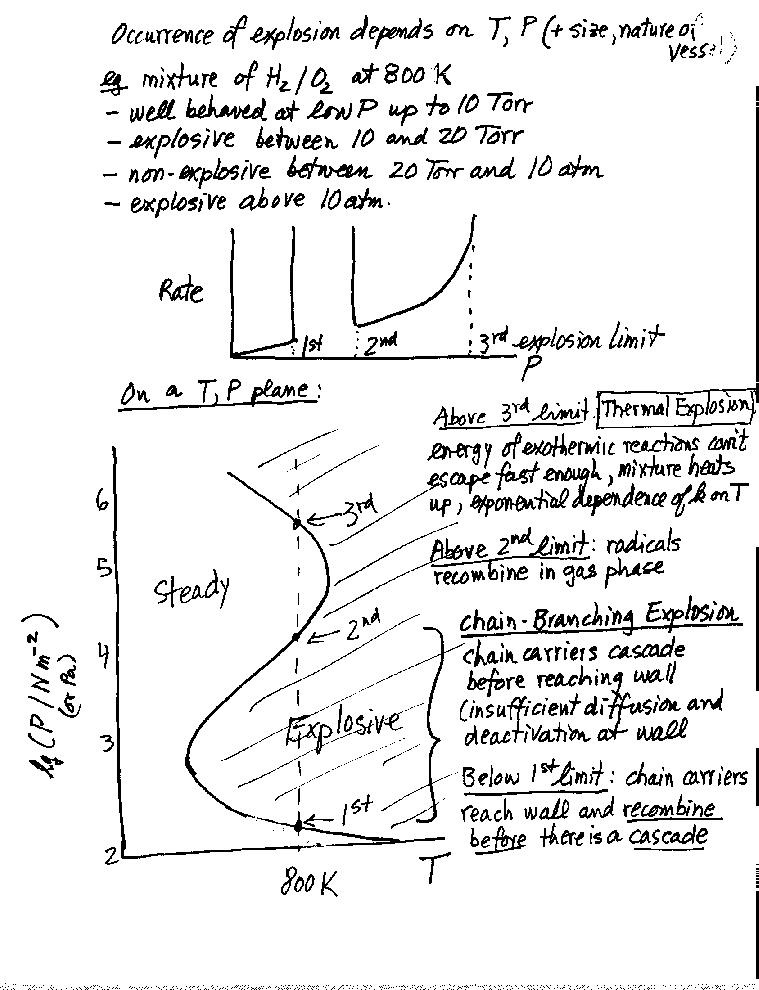
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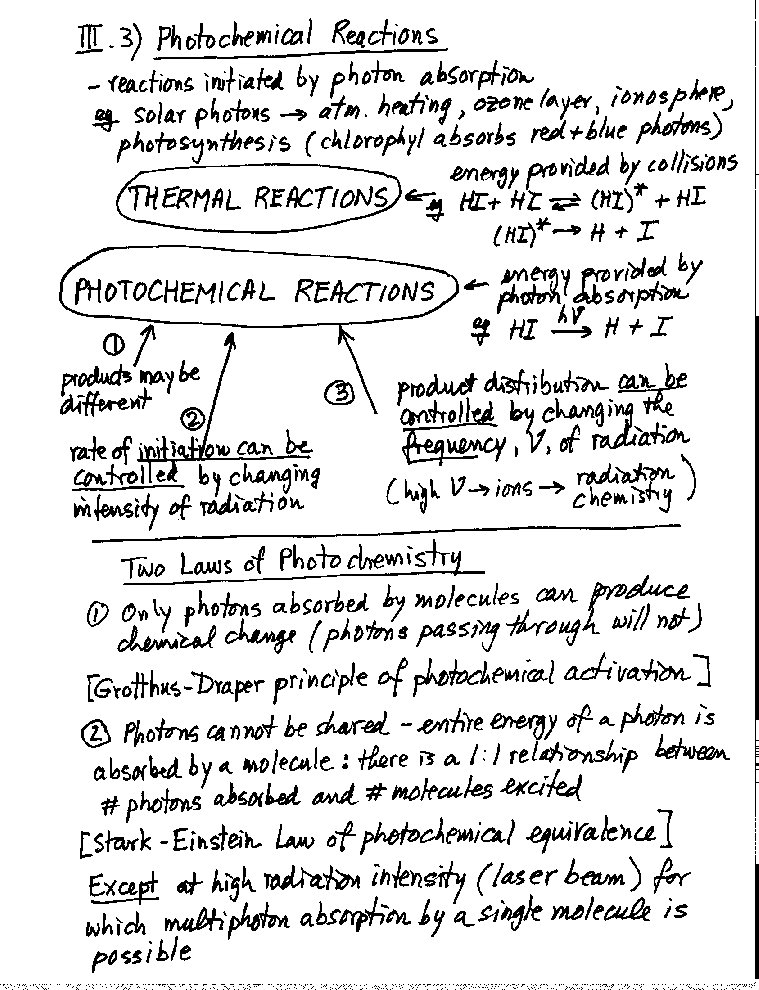
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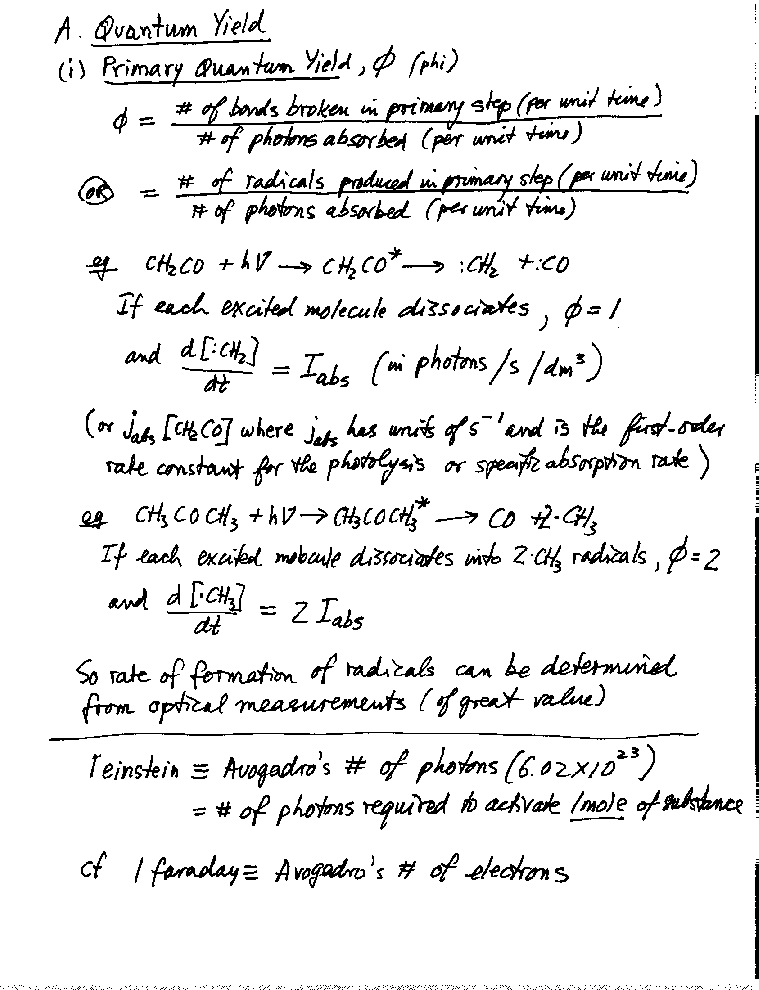
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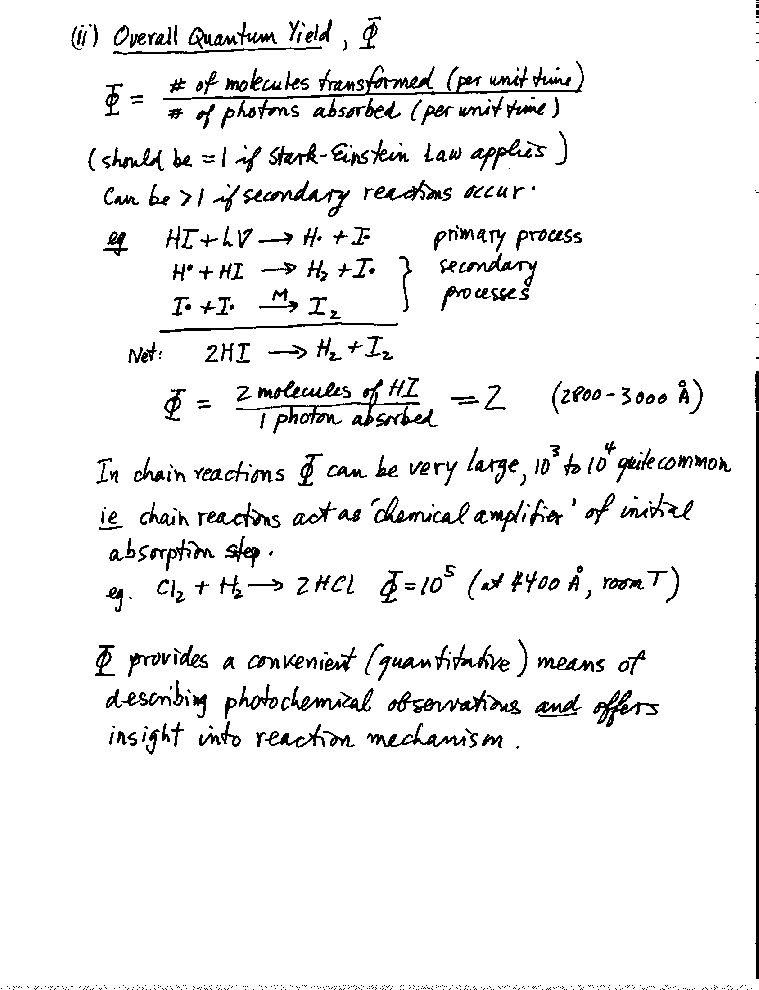
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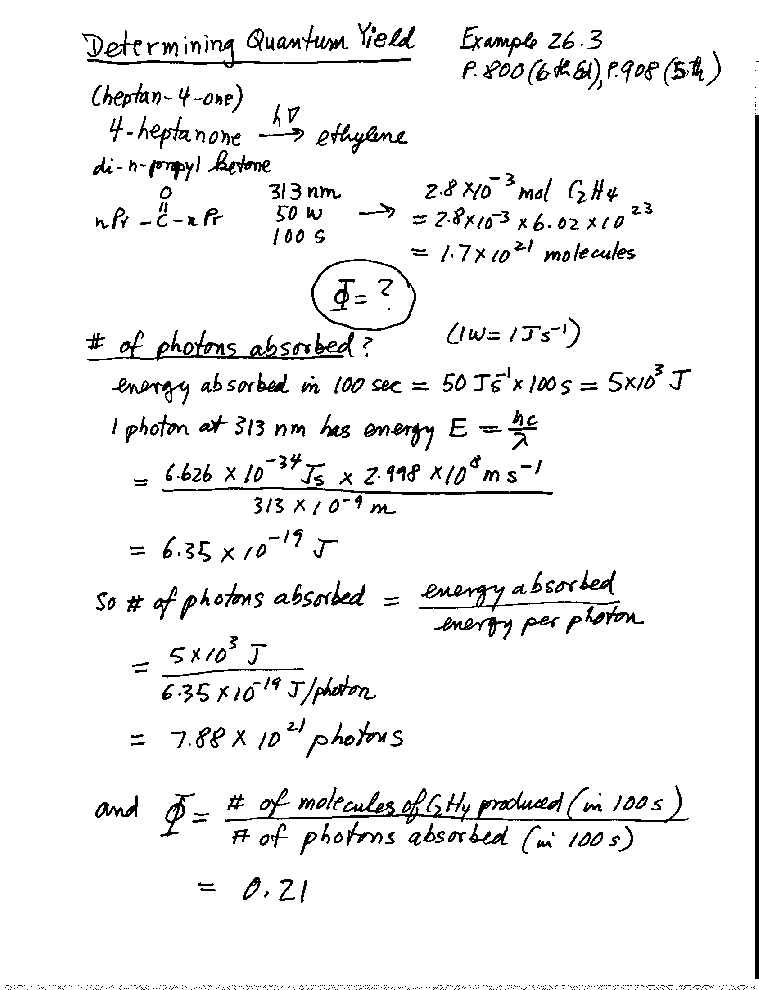
**LECTURE 9**

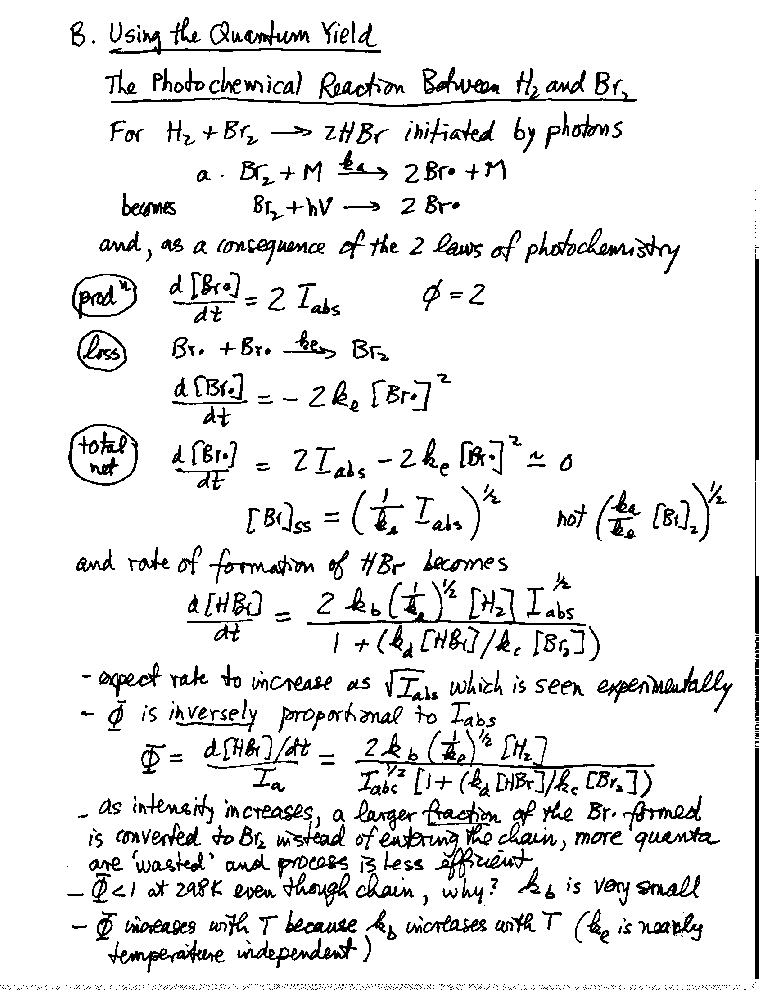
**PHOTOCHEMICAL REACTIONS. POLYMERIZATION KINETICS**

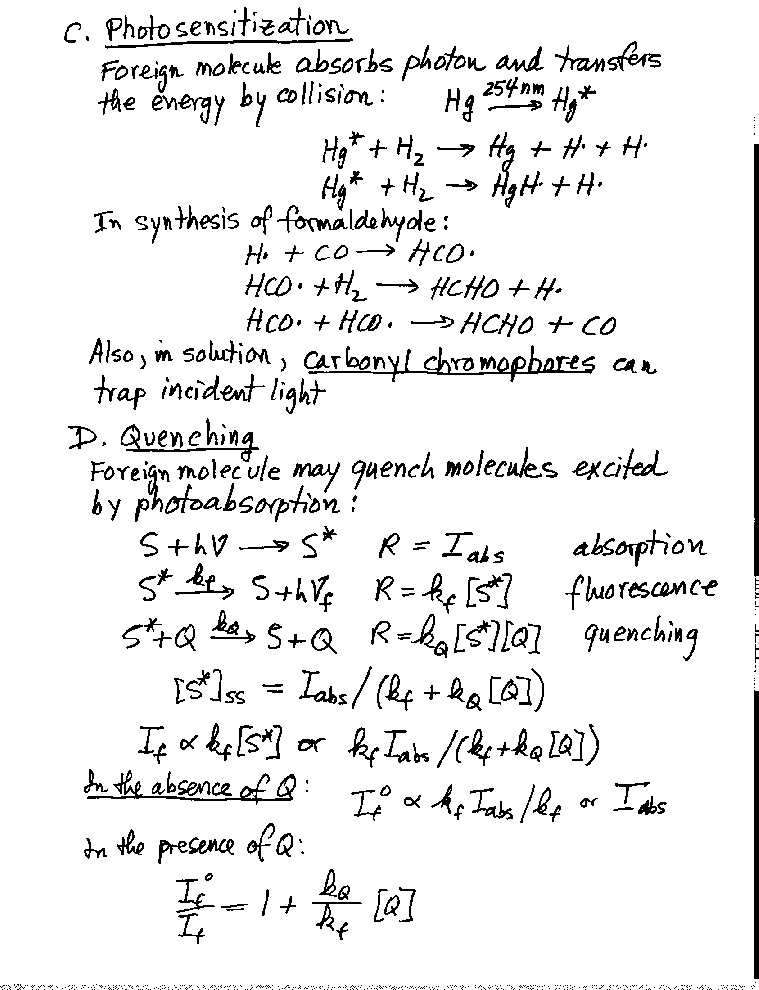
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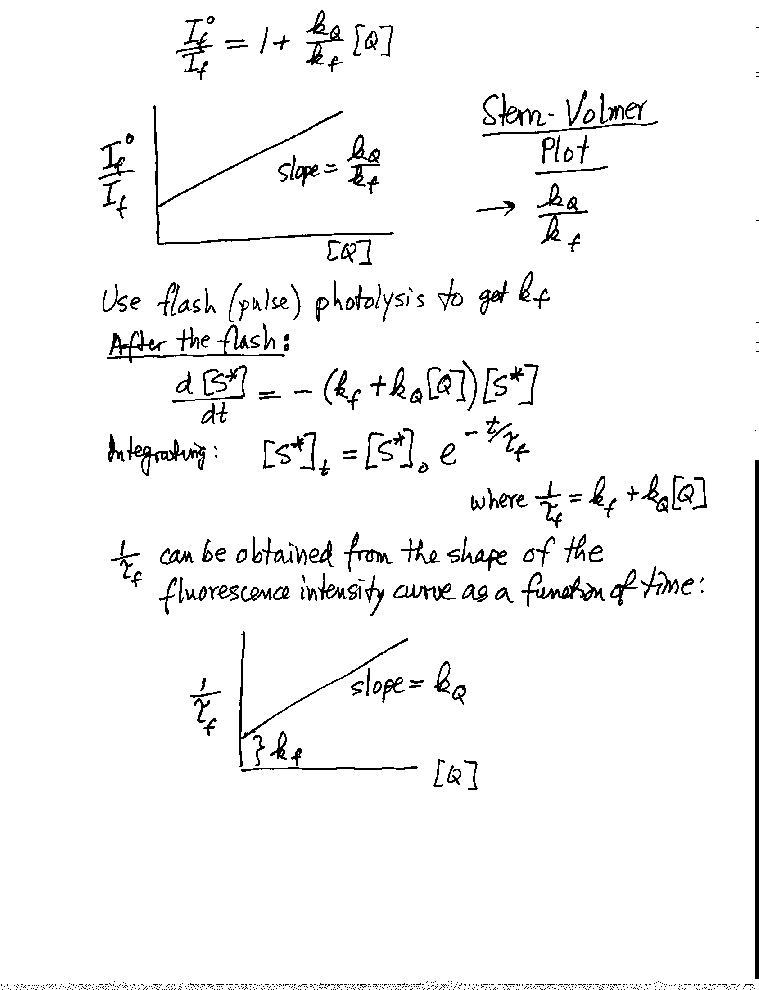
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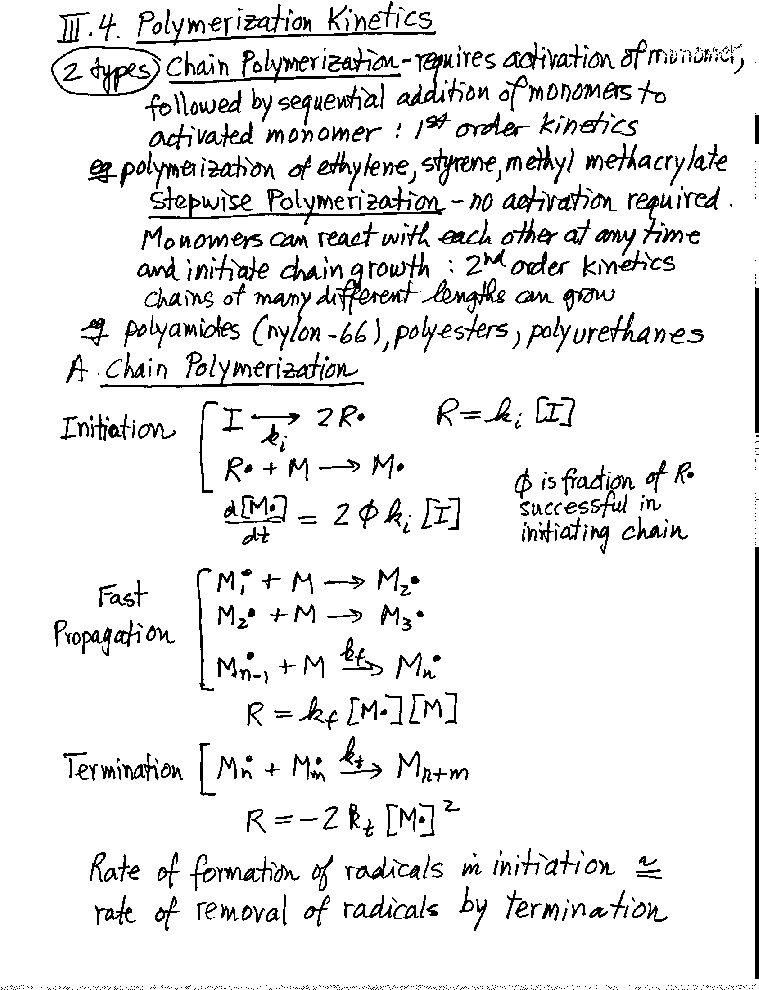
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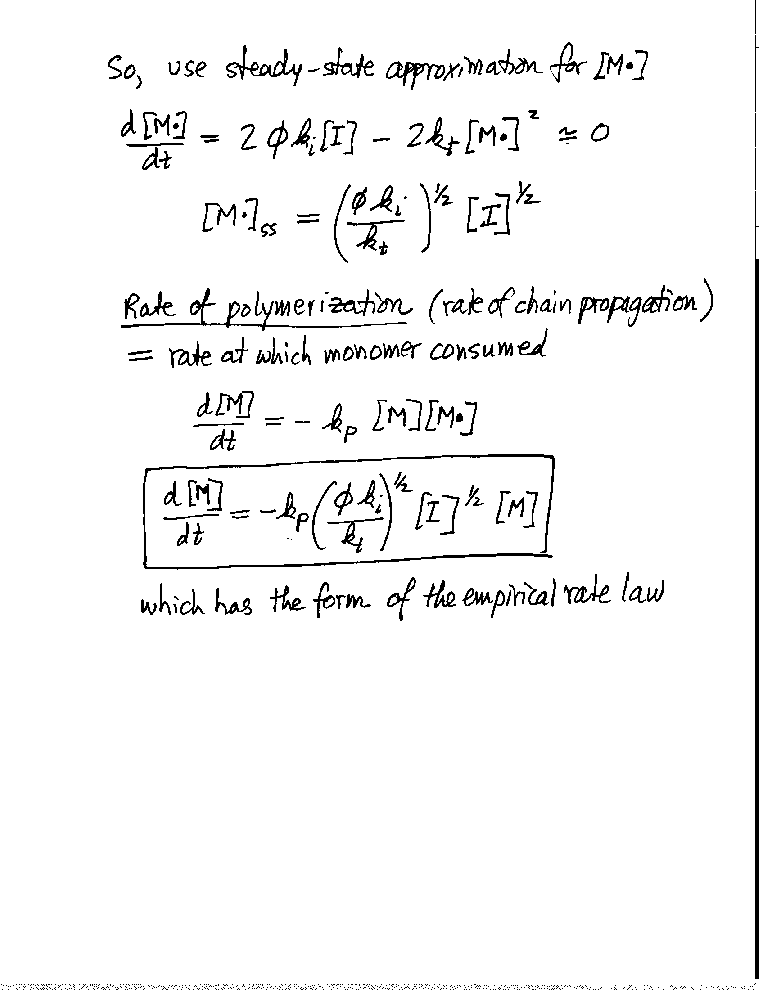
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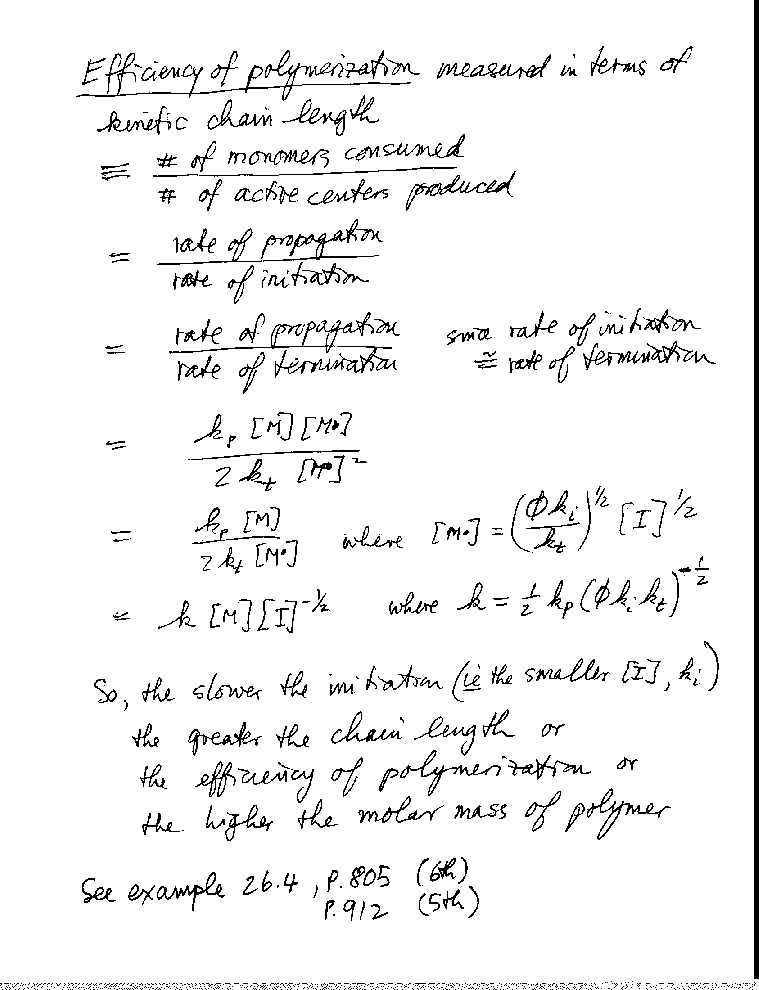
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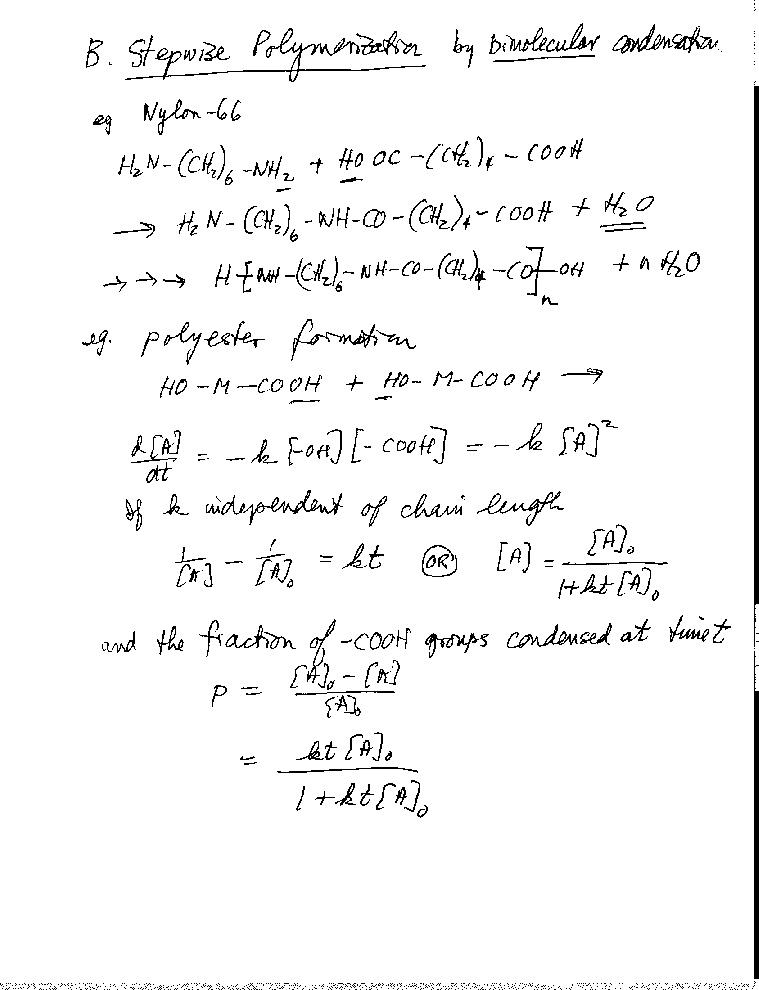
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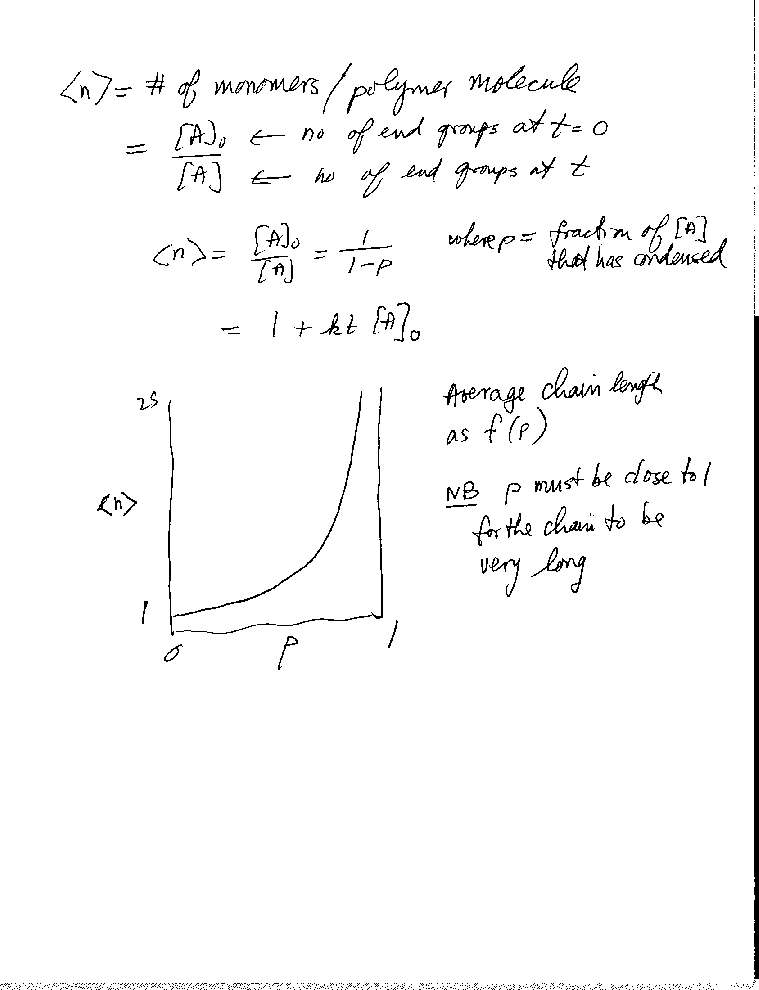
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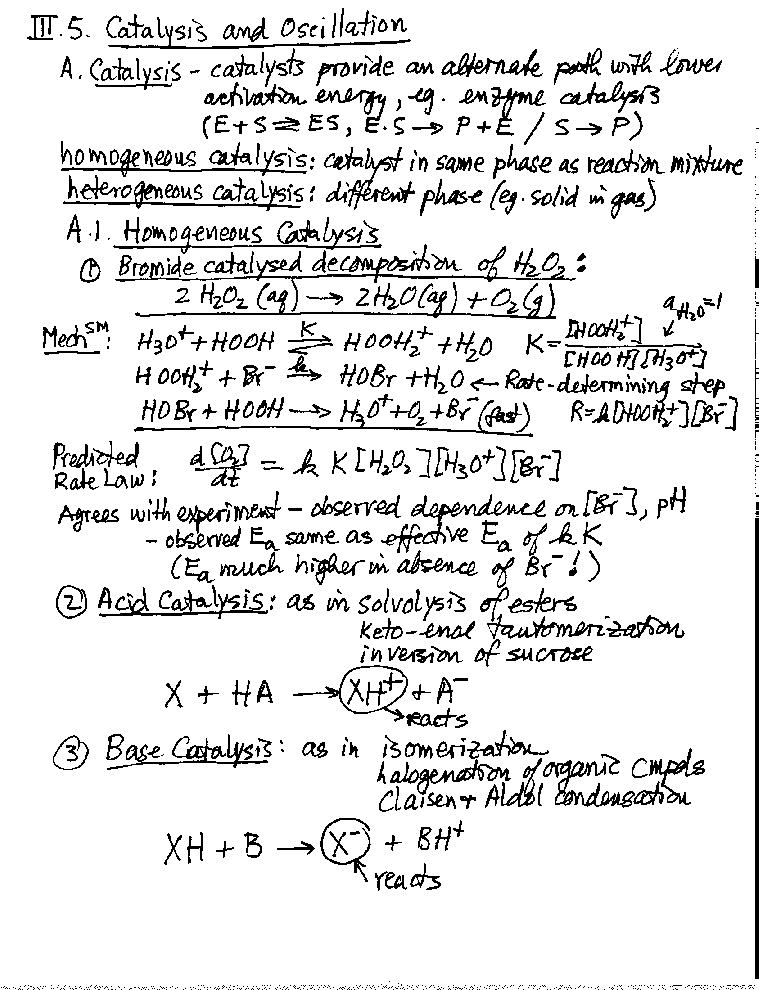
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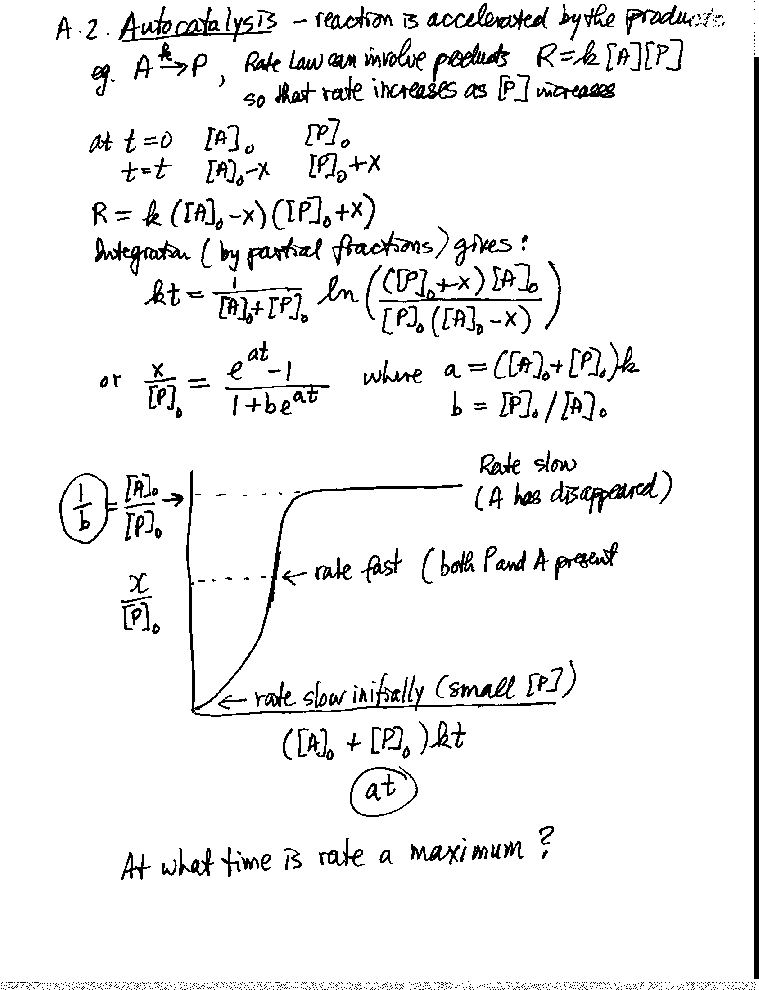
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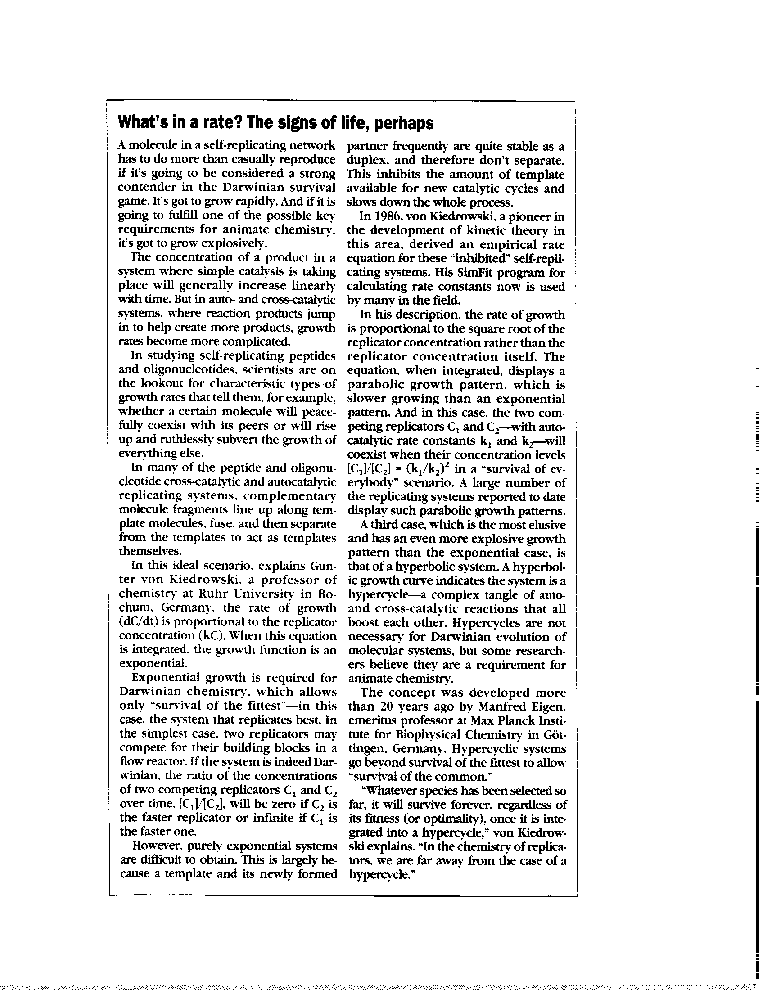
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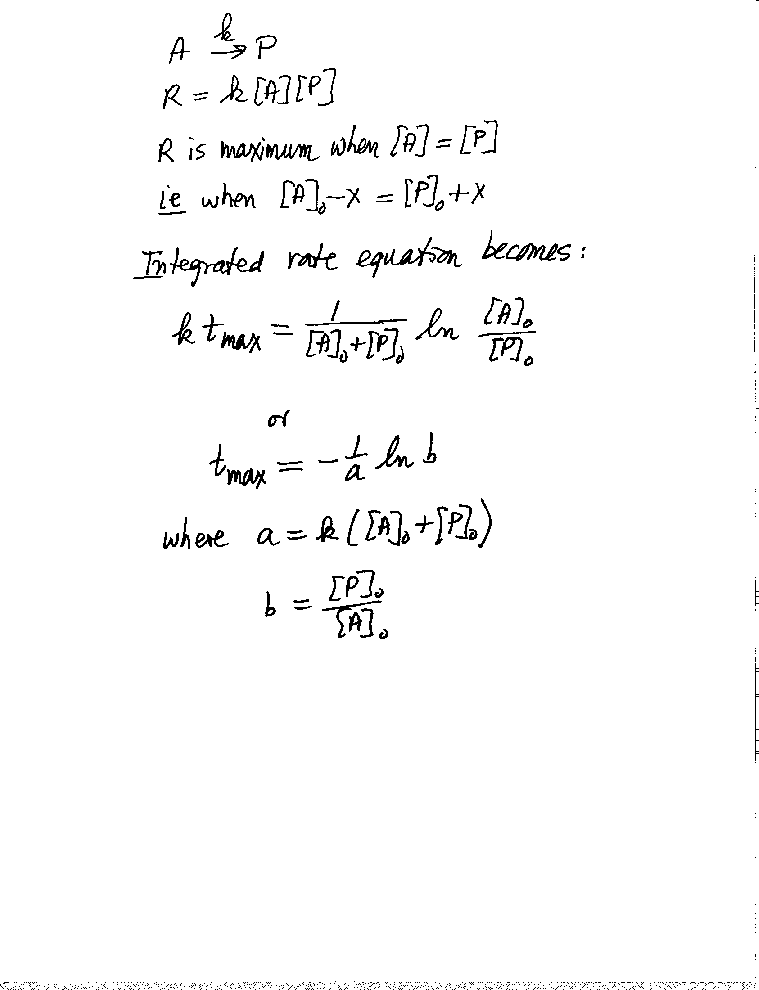
**LECTURE 10**

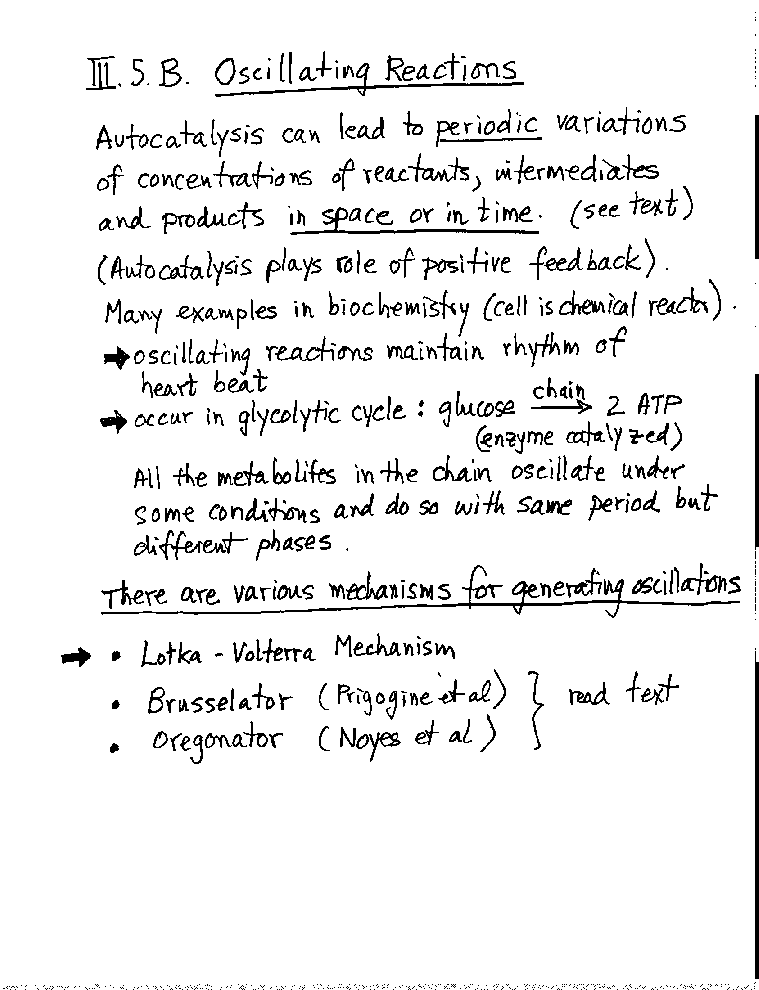
**CATALYSIS AND OSCILLATION. REACTIONS IN SOLUTION**

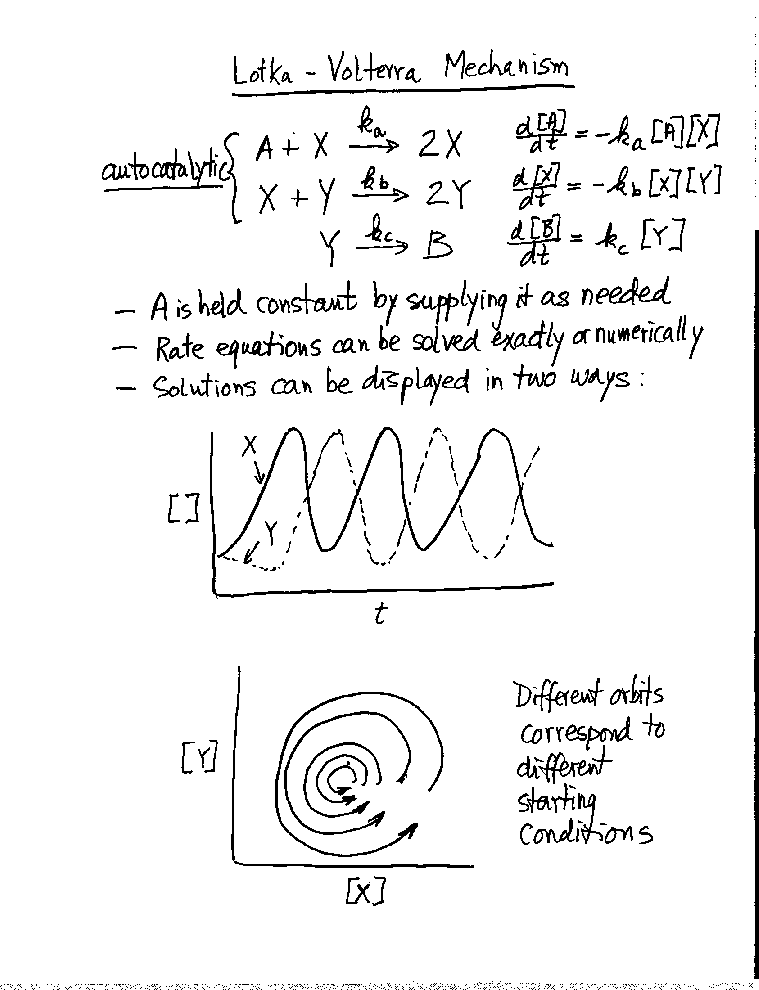
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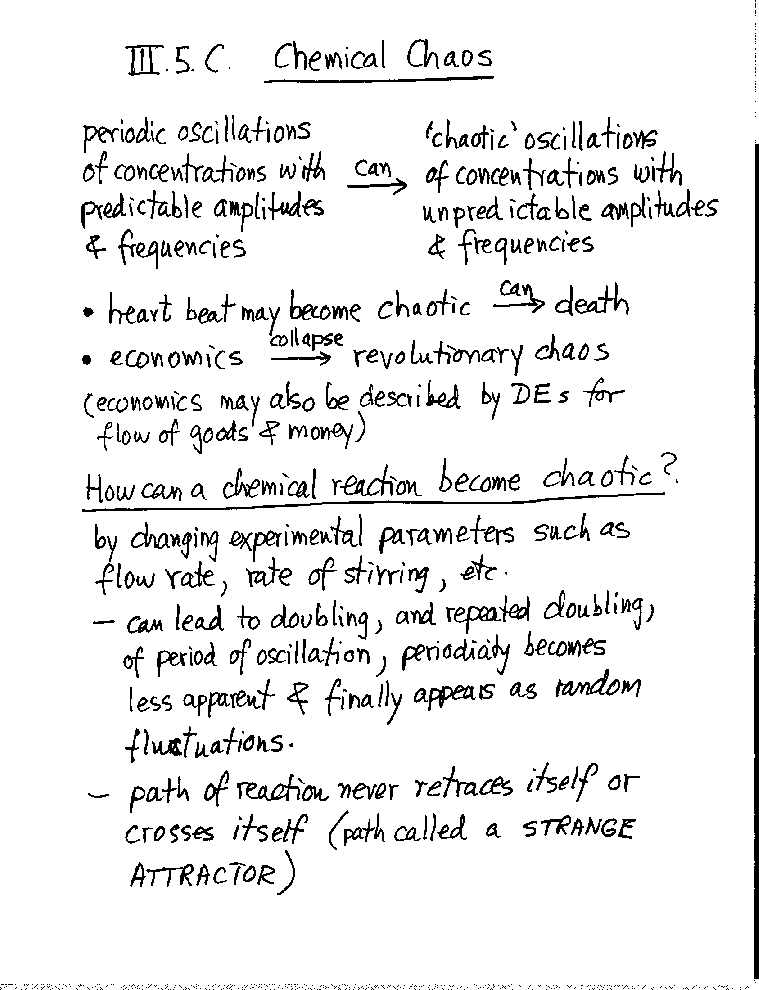
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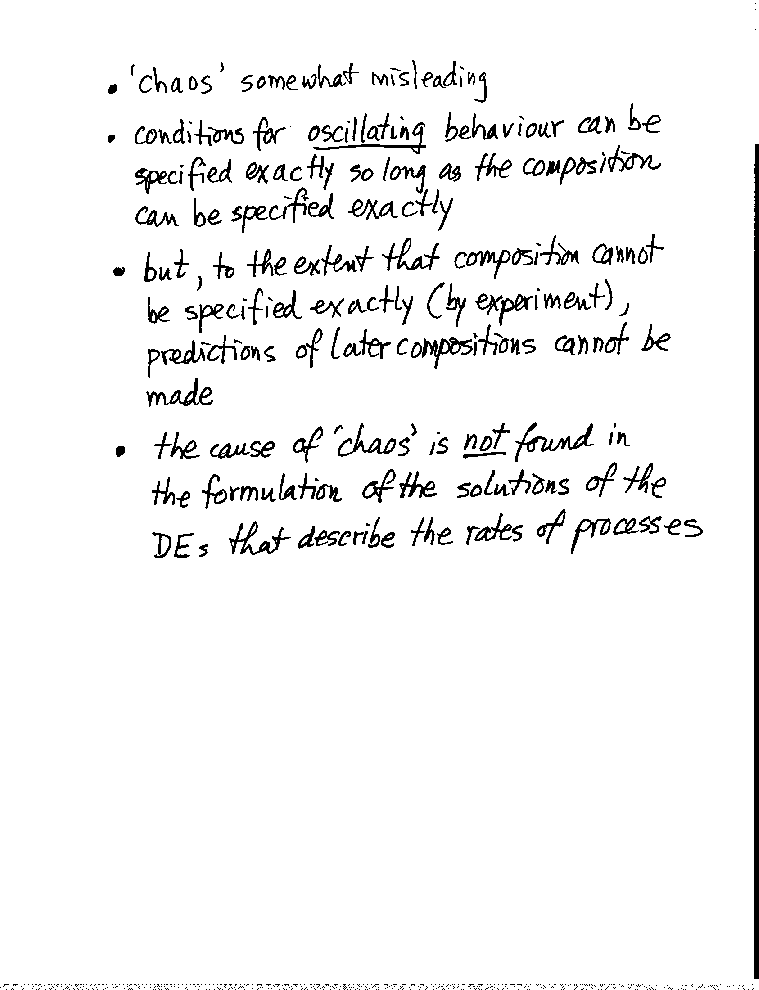
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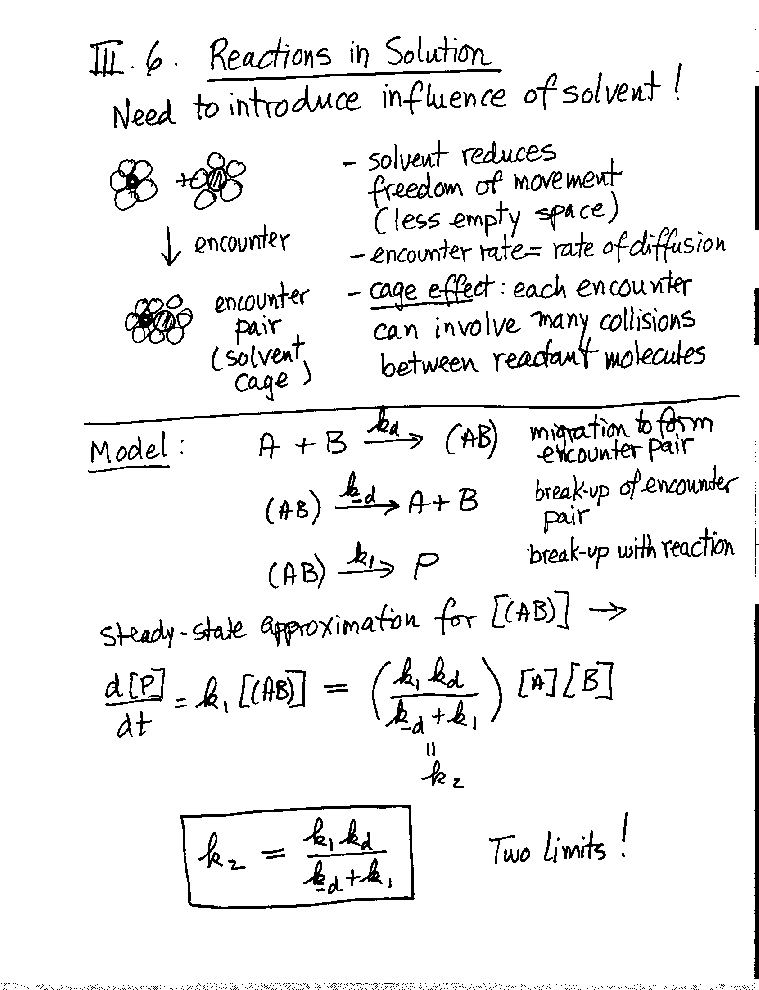
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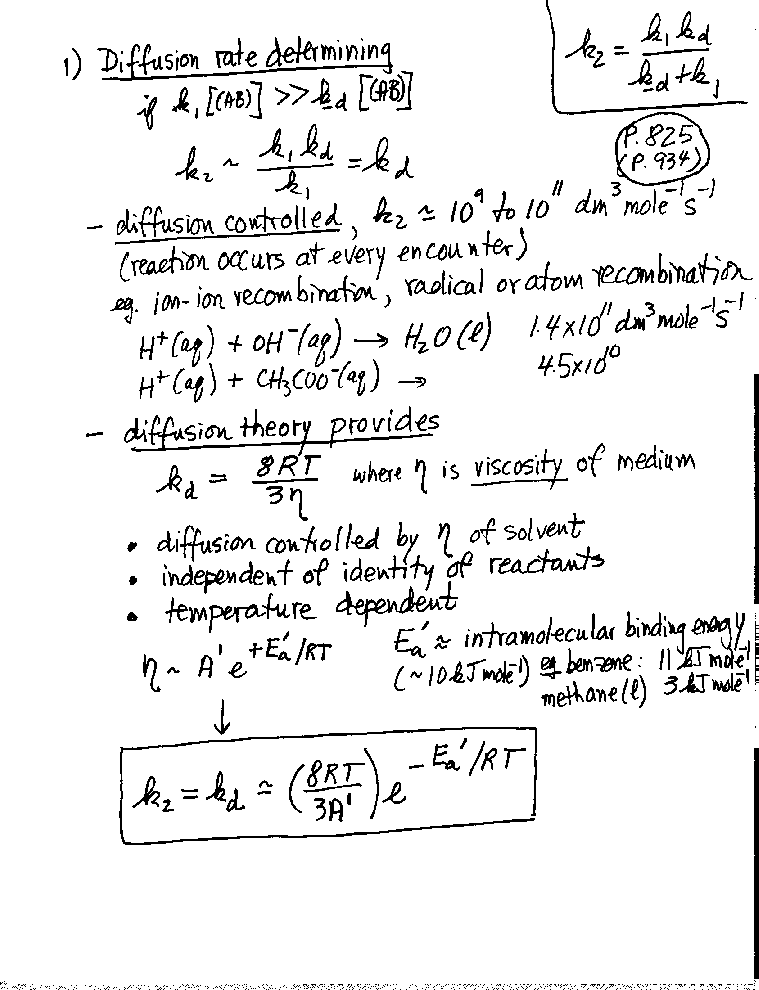
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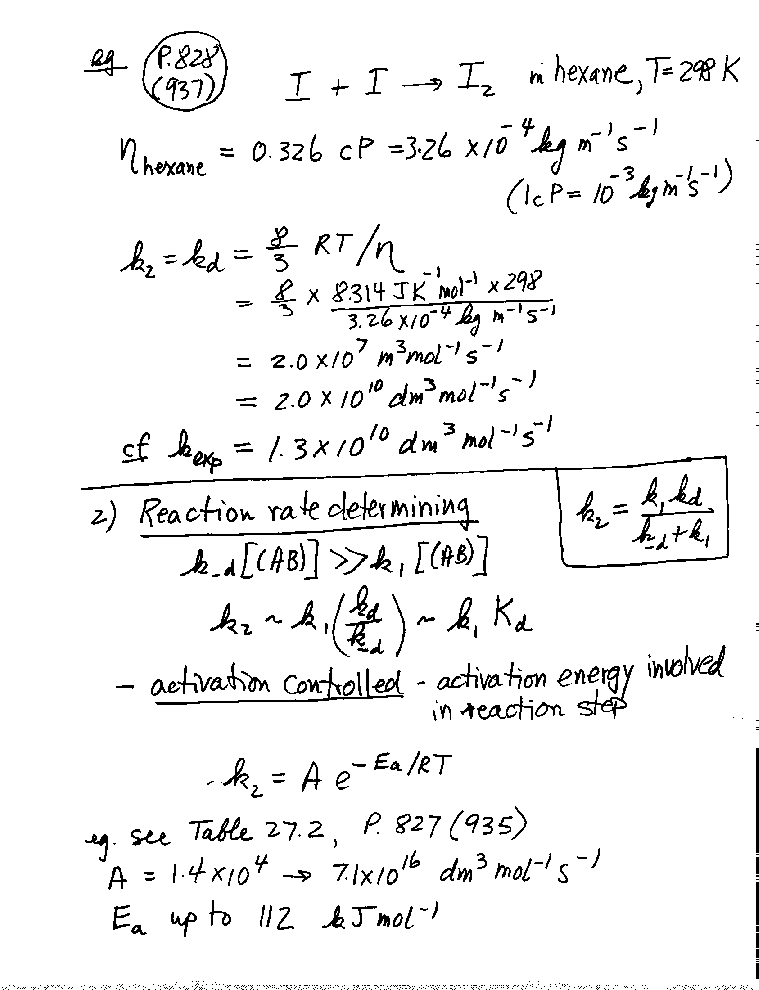
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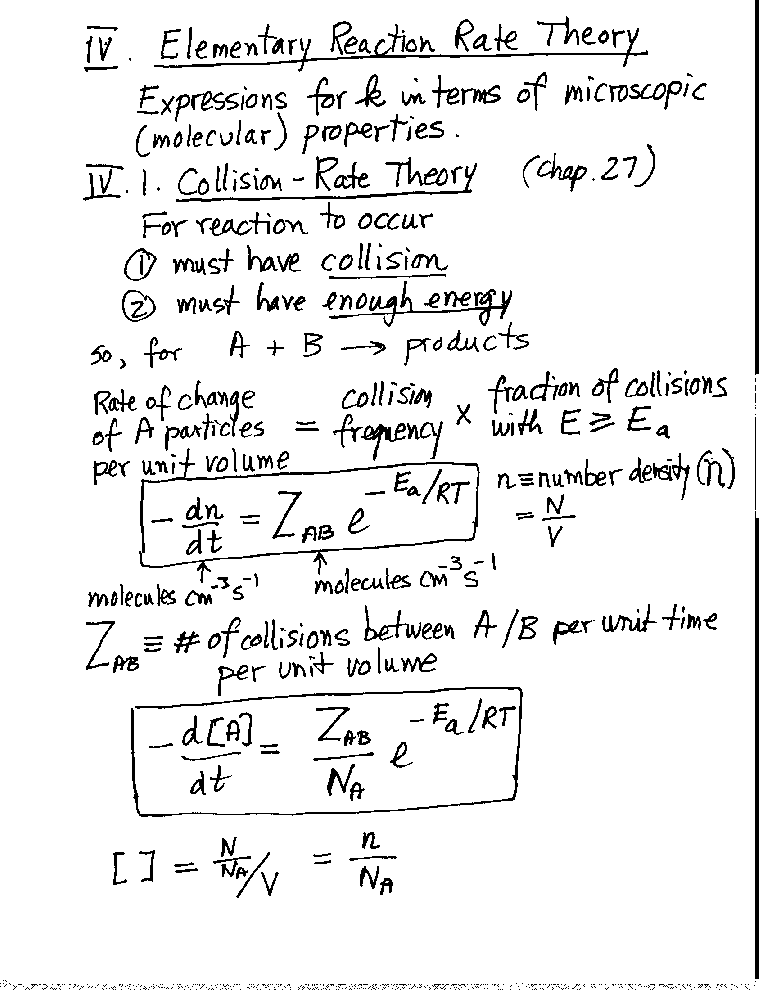
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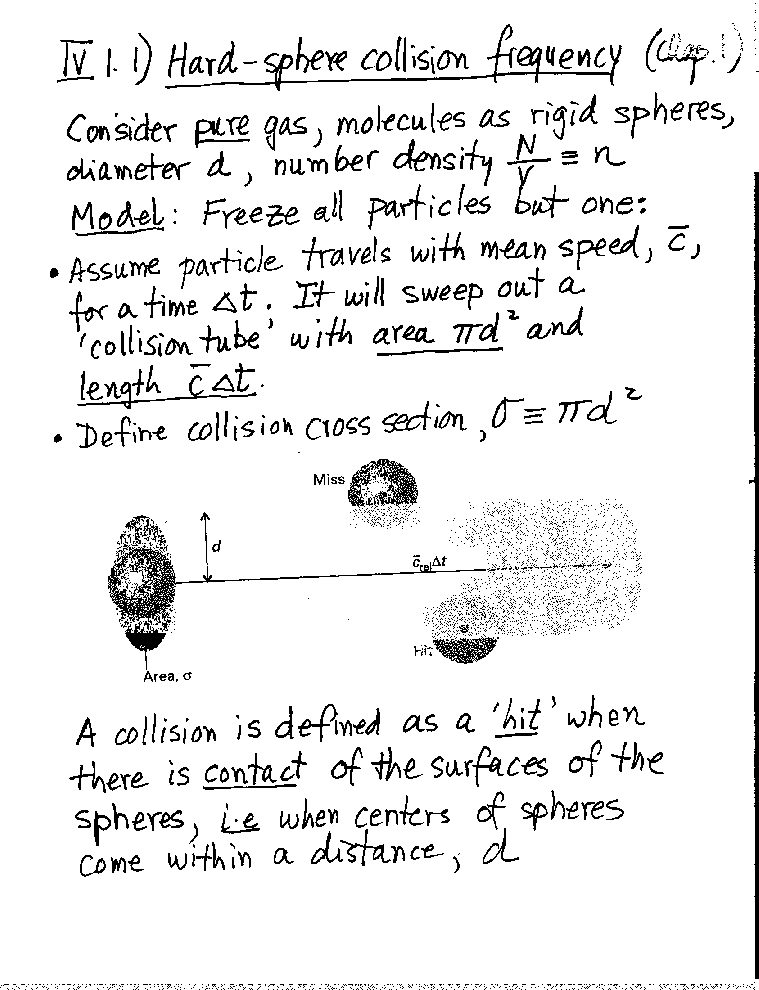
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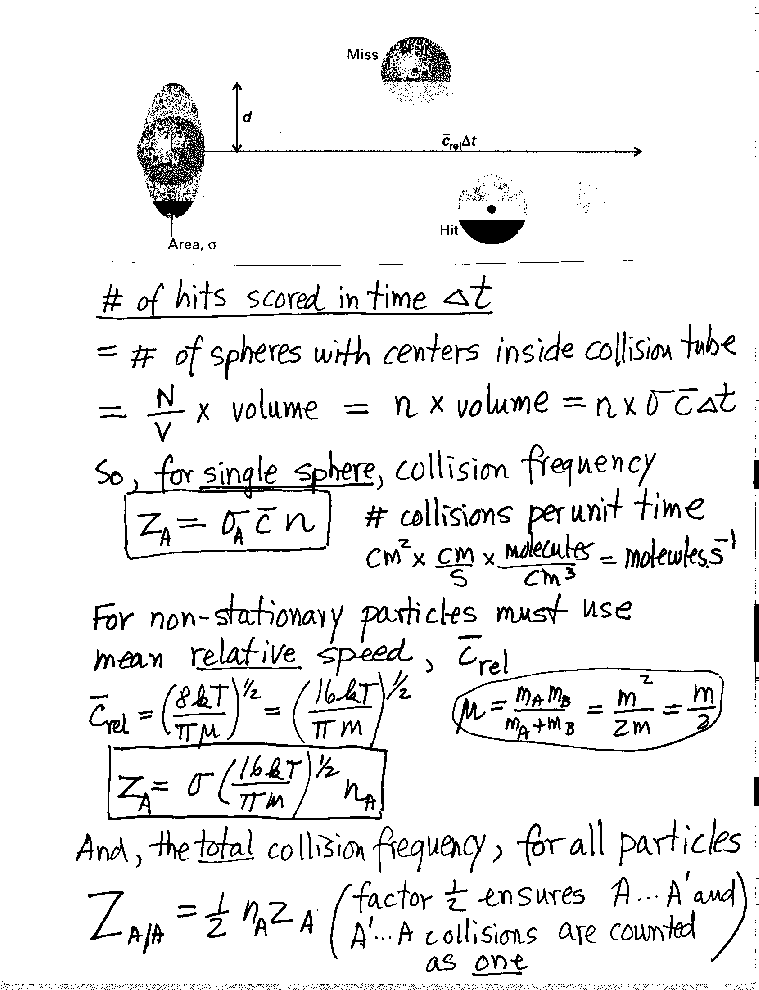
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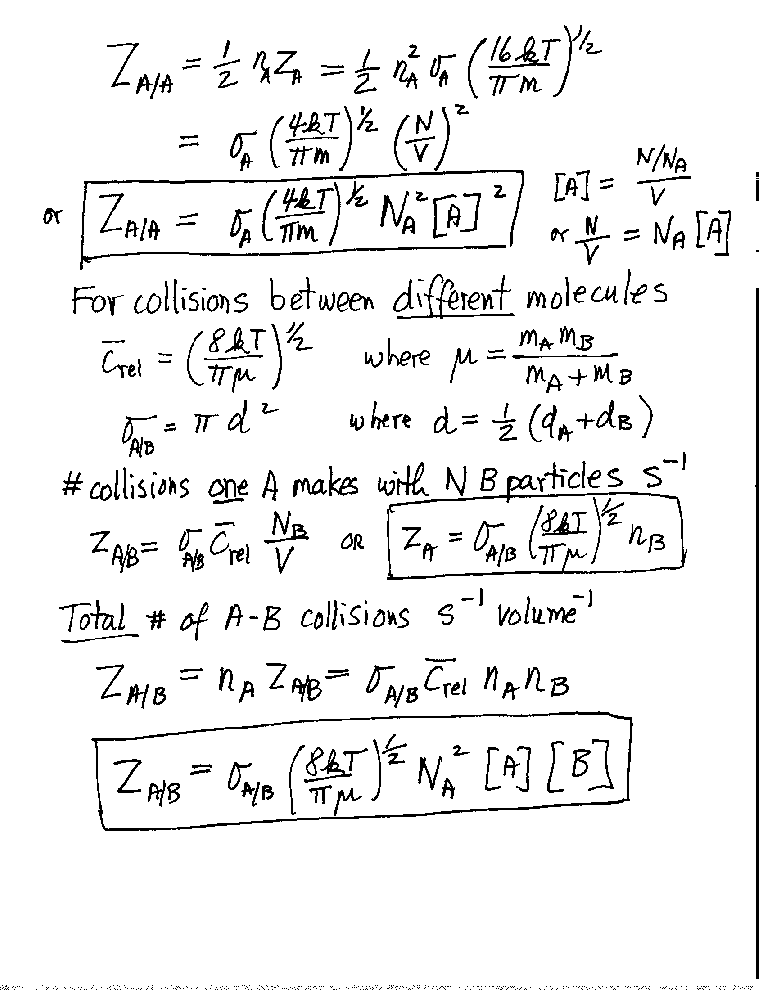
**LECTURE 11**

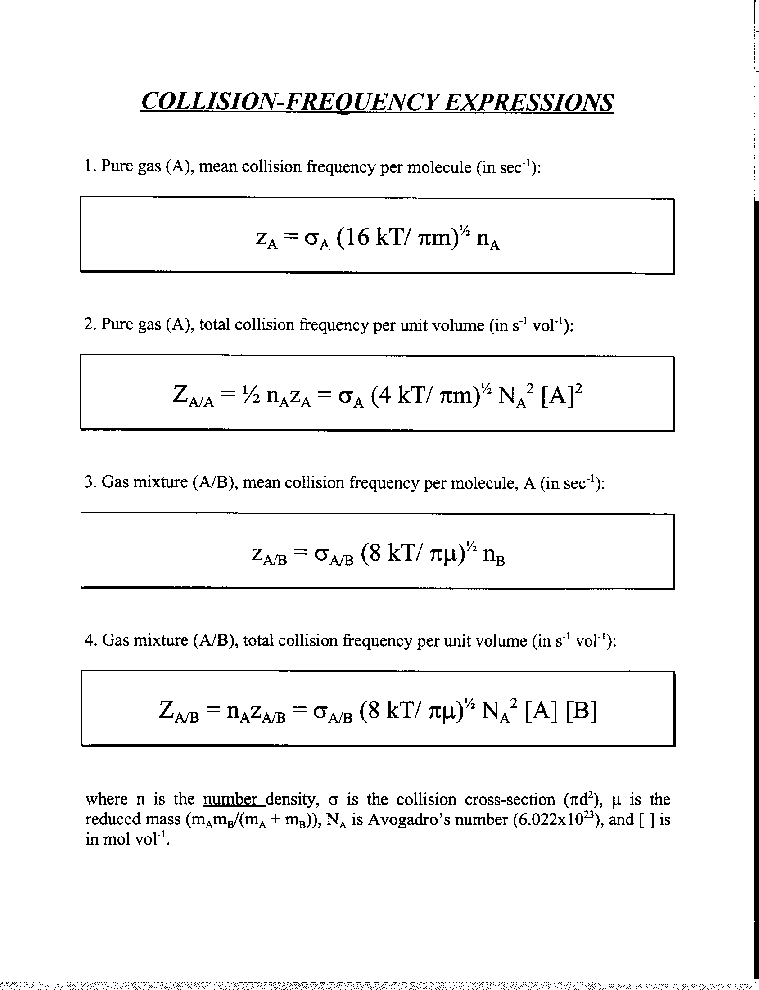
**ELEMENTARY REACTION RATE THEORY. COLLISION RATE THEORY. HARD-SPHERE COLLISION FREQUENCY.  COLLISION RATE CONSTANT. "HARPOON" REACTIONS**

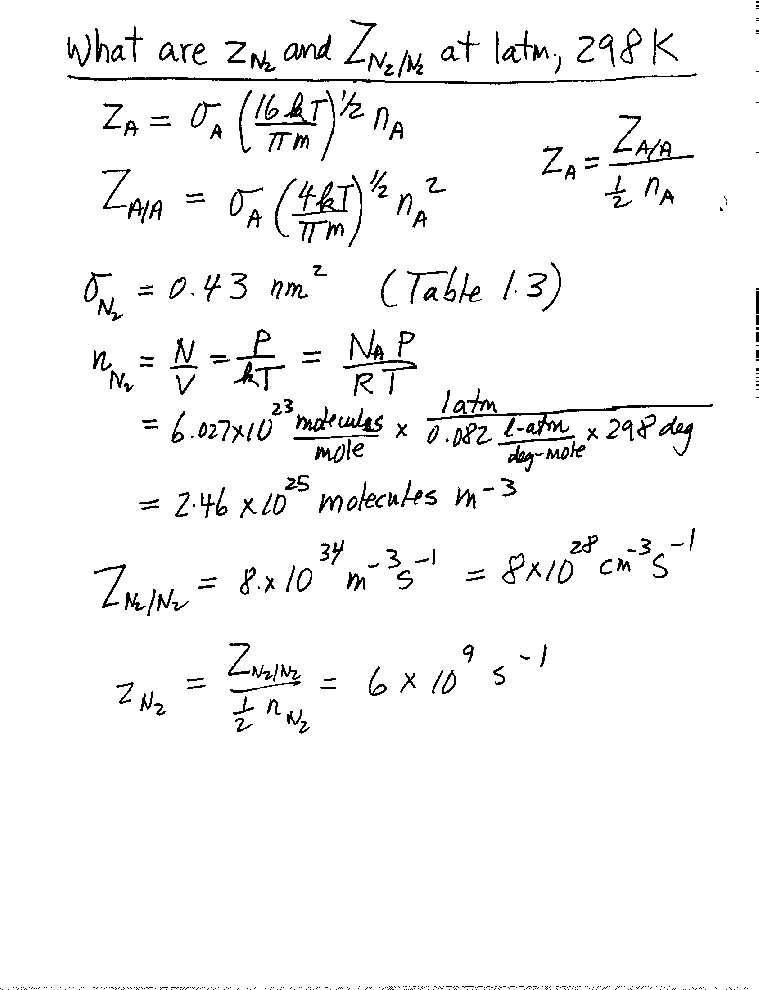
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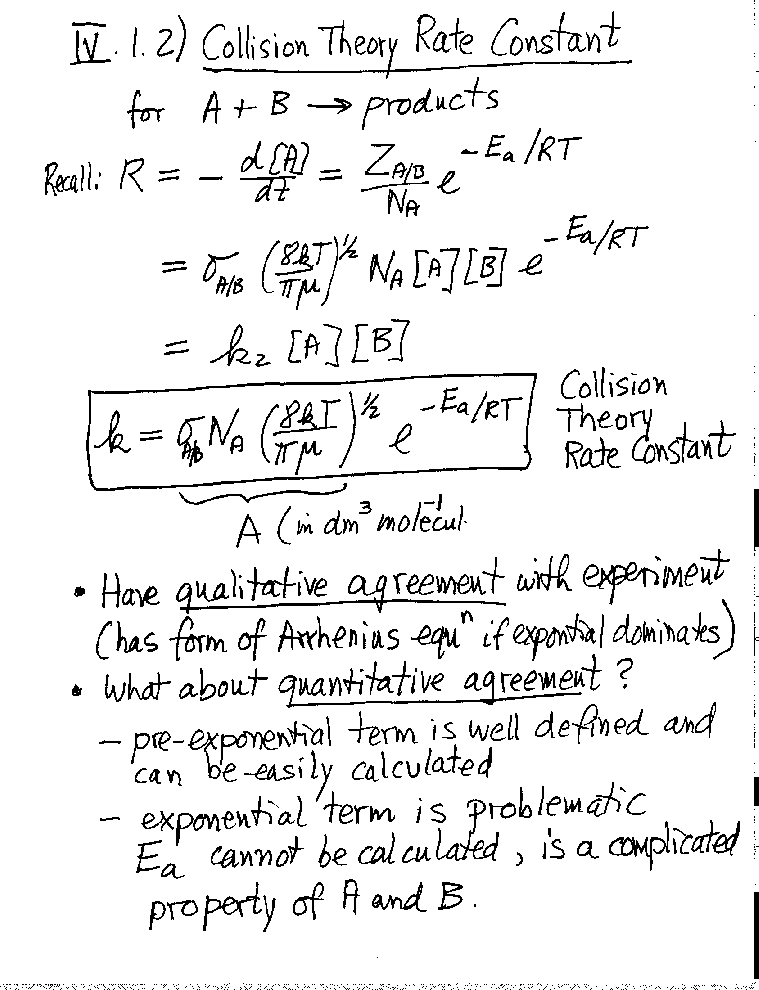
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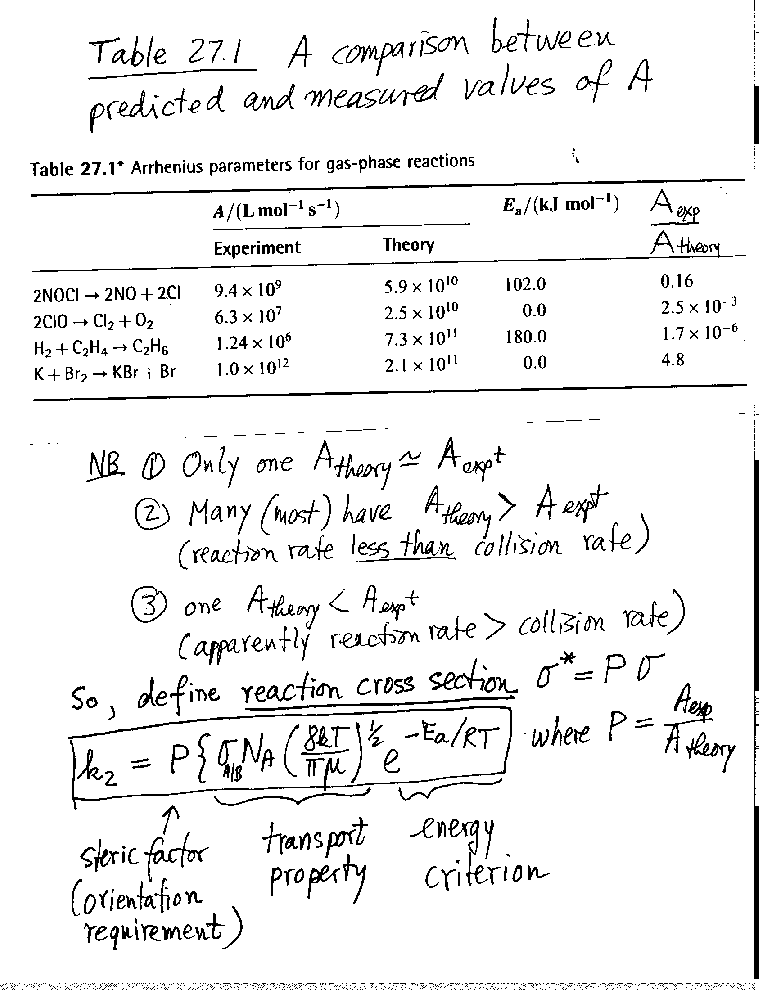
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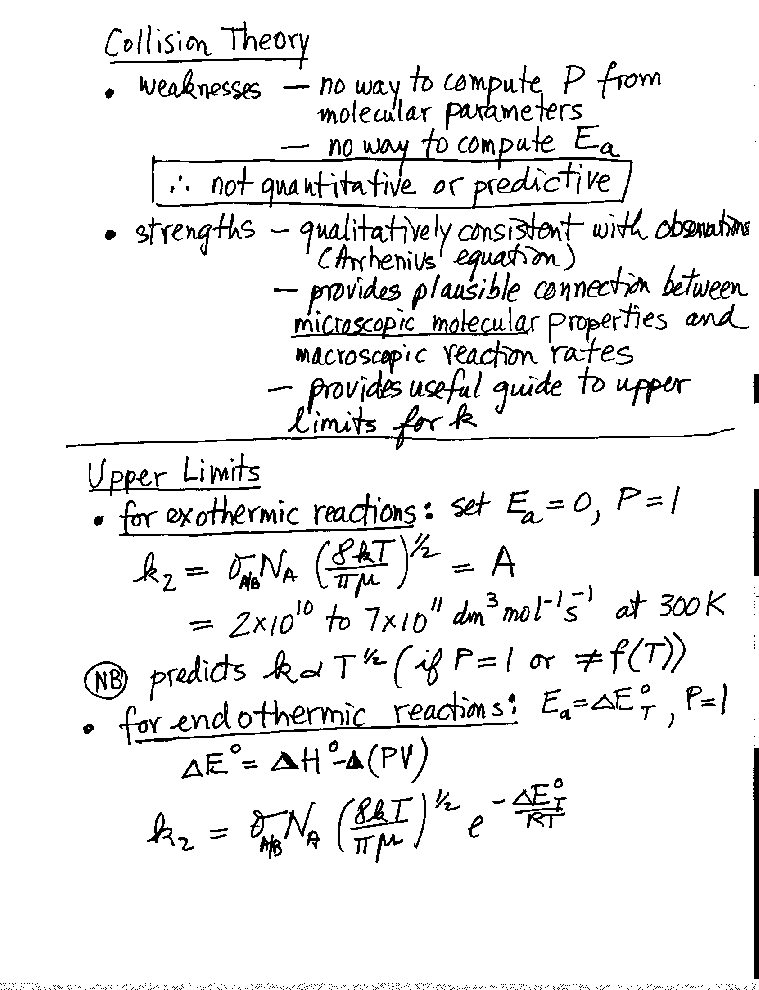
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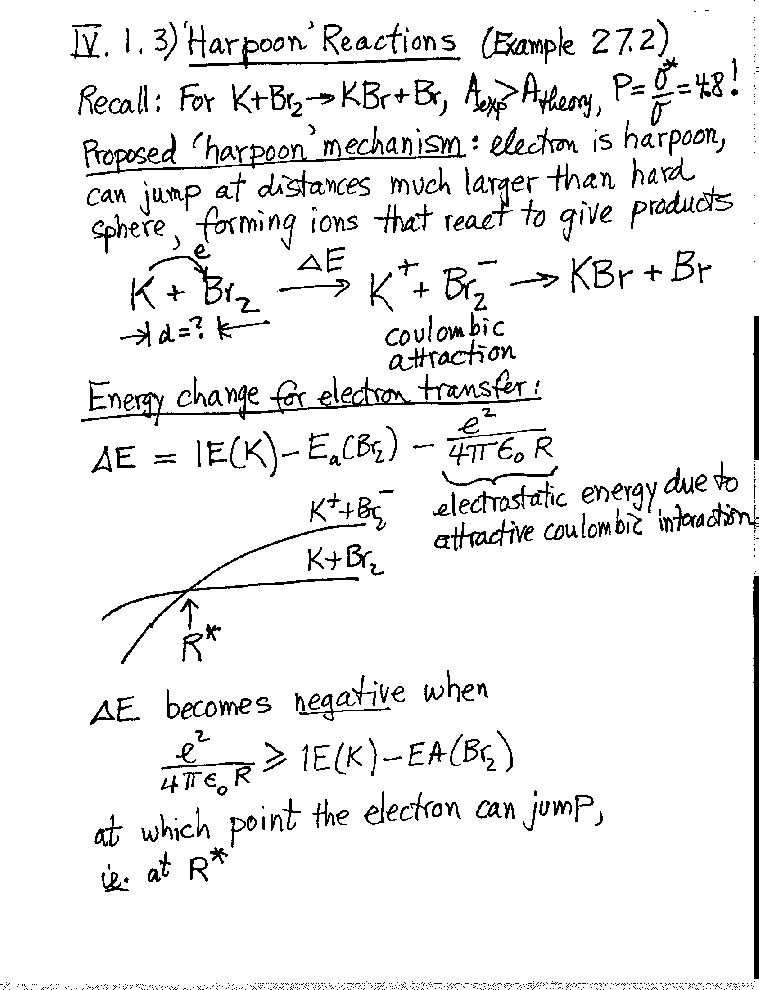
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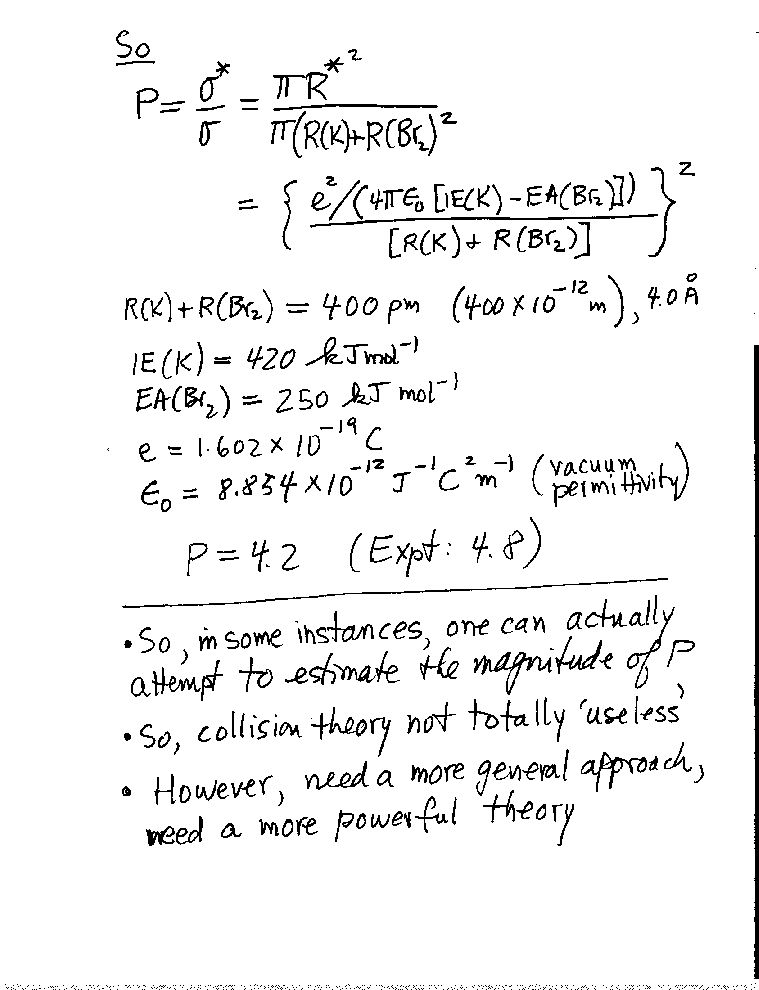
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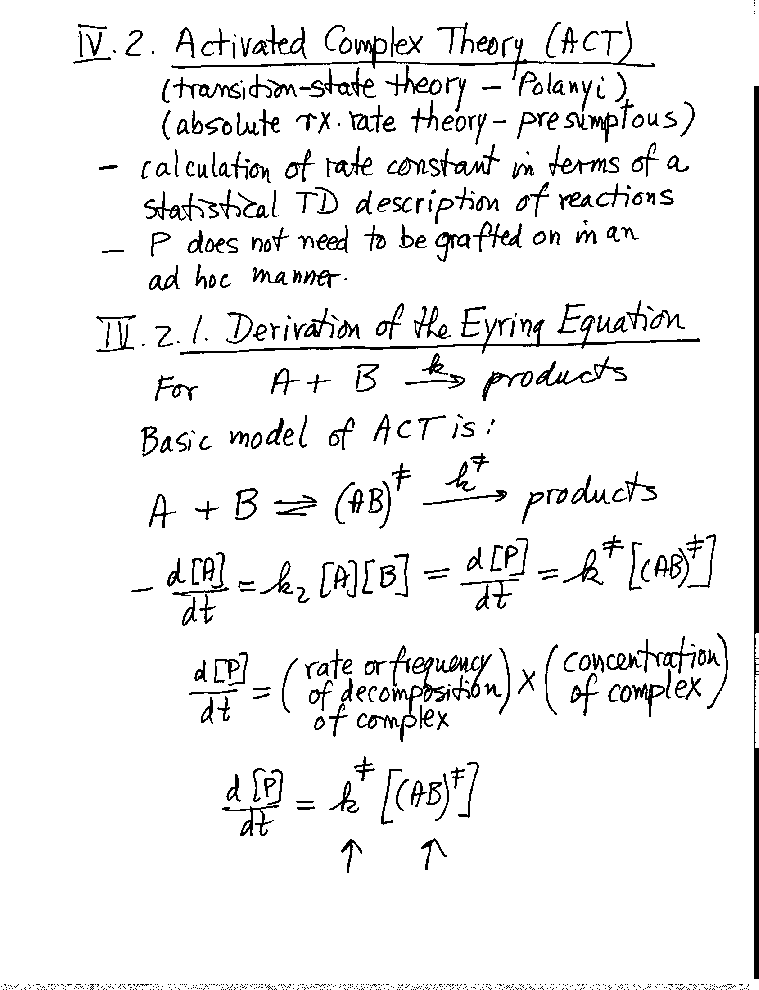
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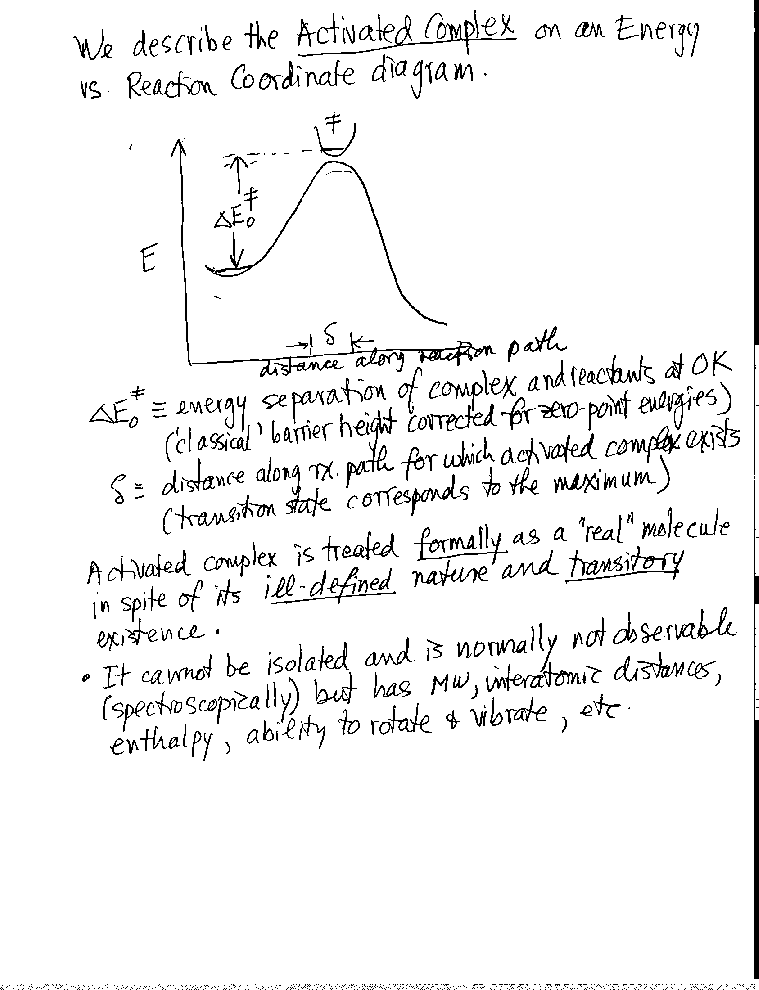
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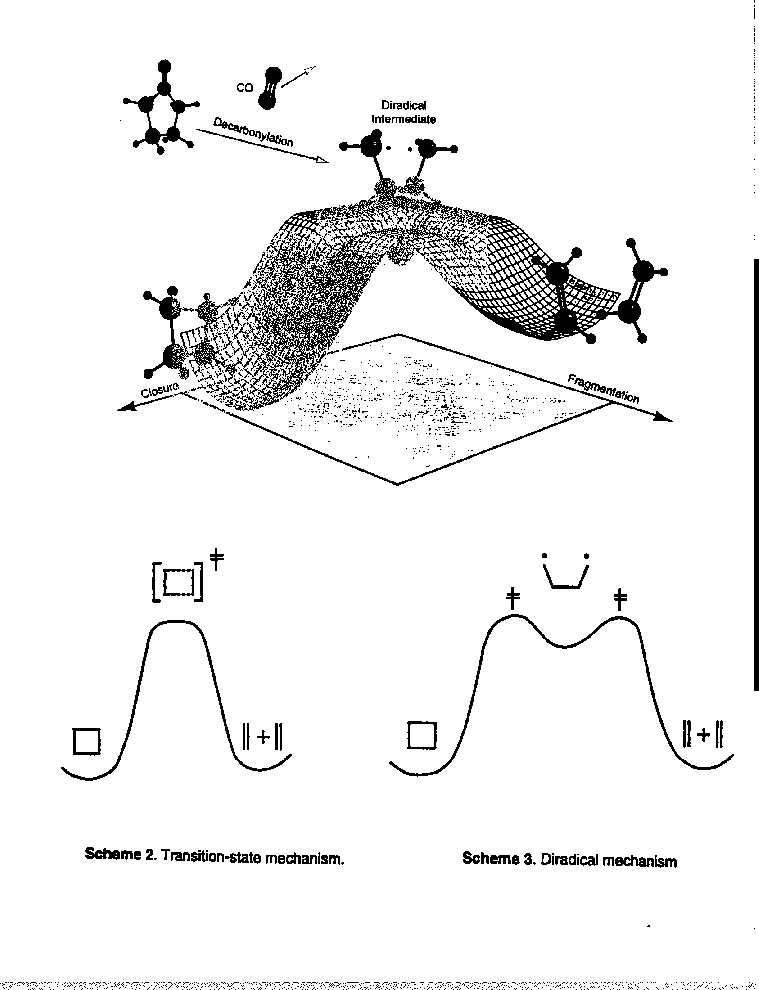
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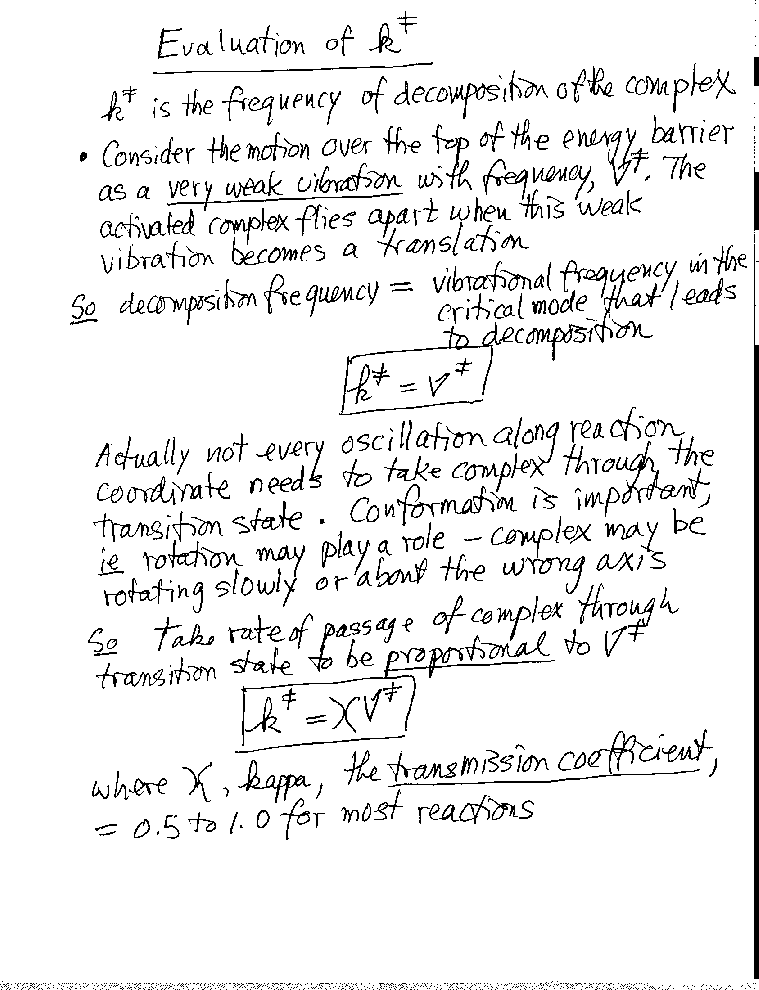
**LECTURE 12**

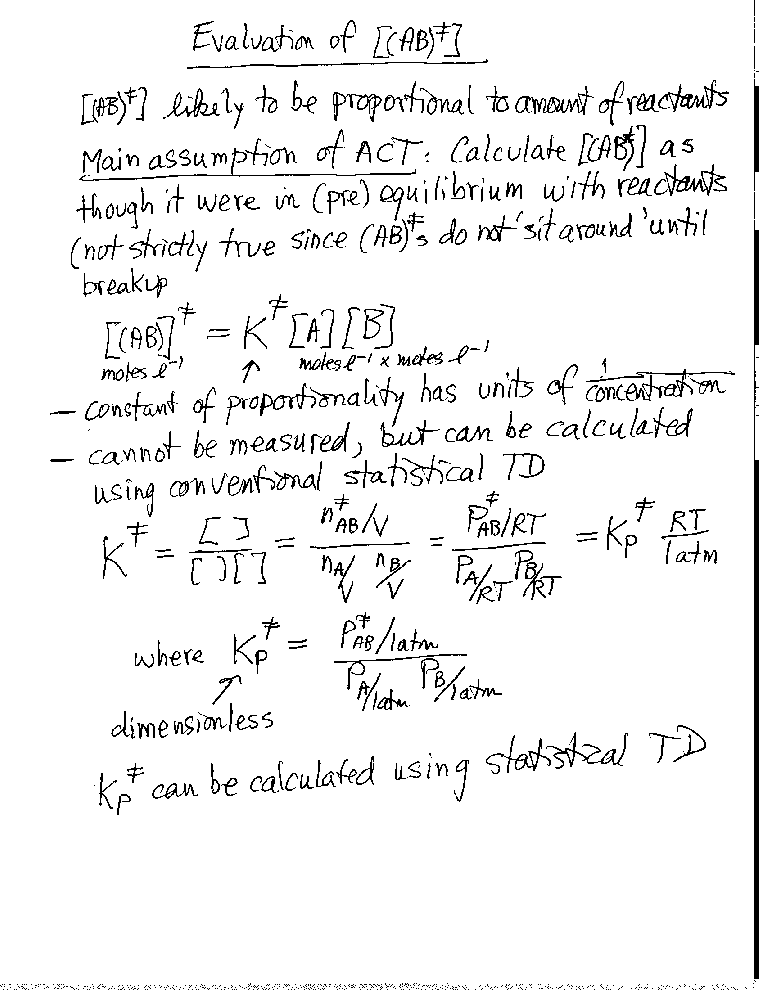
**ACTIVATED-COMPLEX THEORY. DERIVATION OF EYRING EQUATION. APPLICATION OF EYRING EQUATION. THERMODINAMIC FORMULATION OF THE EYRING EQUATION. ISOTOPE EFFECTS.**

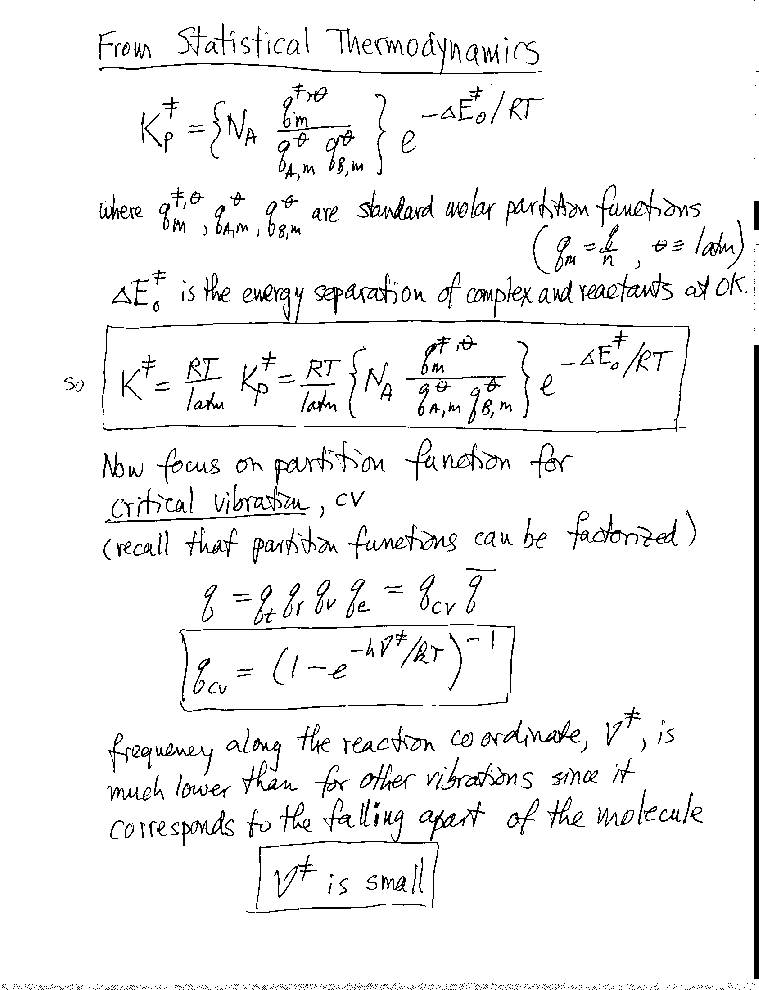
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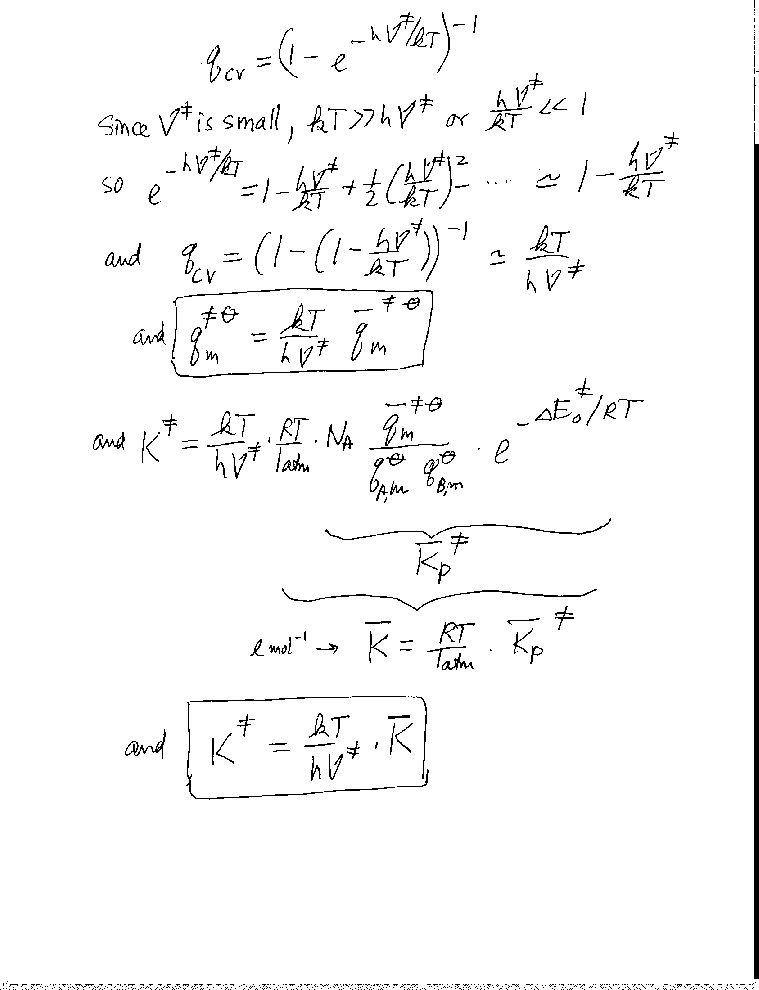
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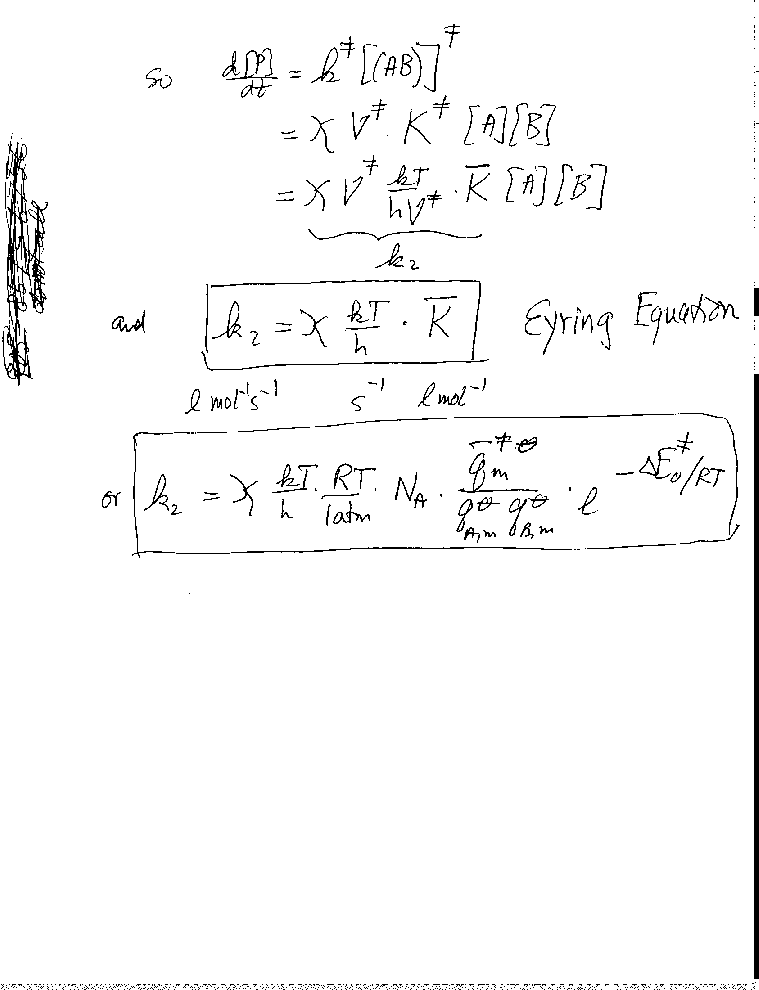
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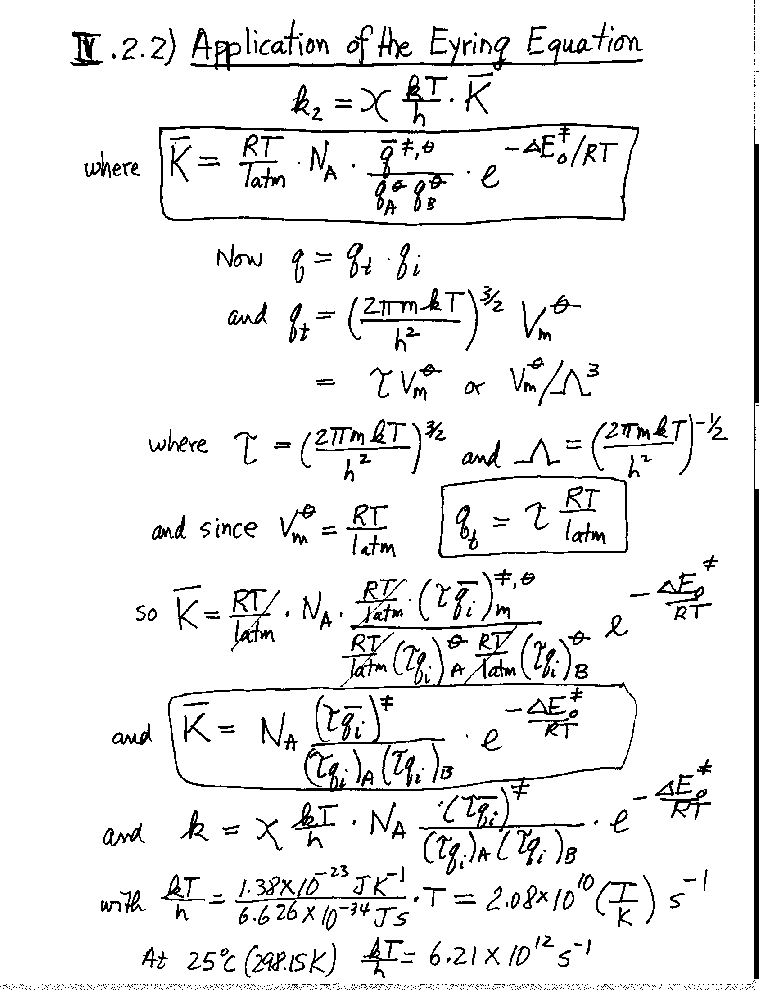
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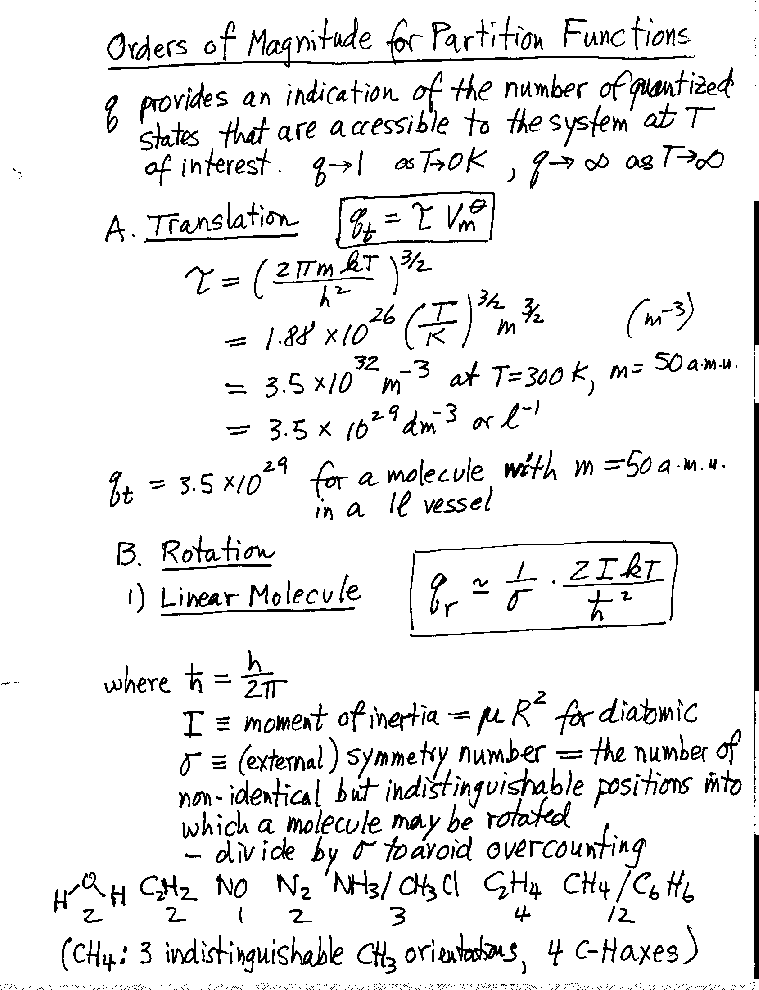
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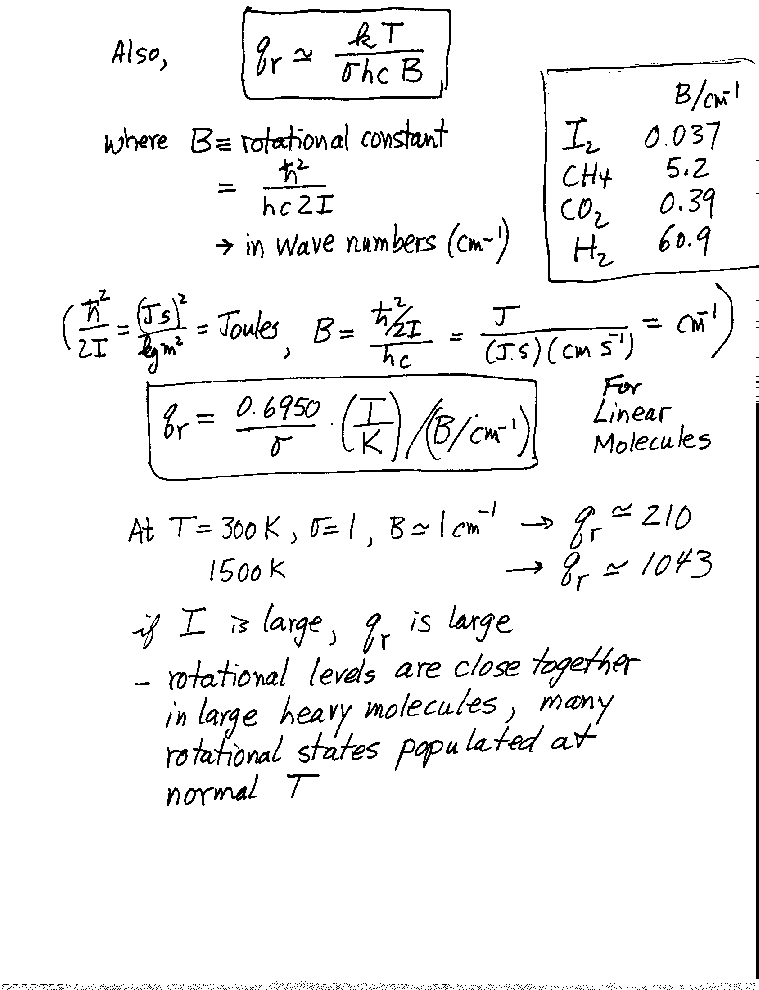
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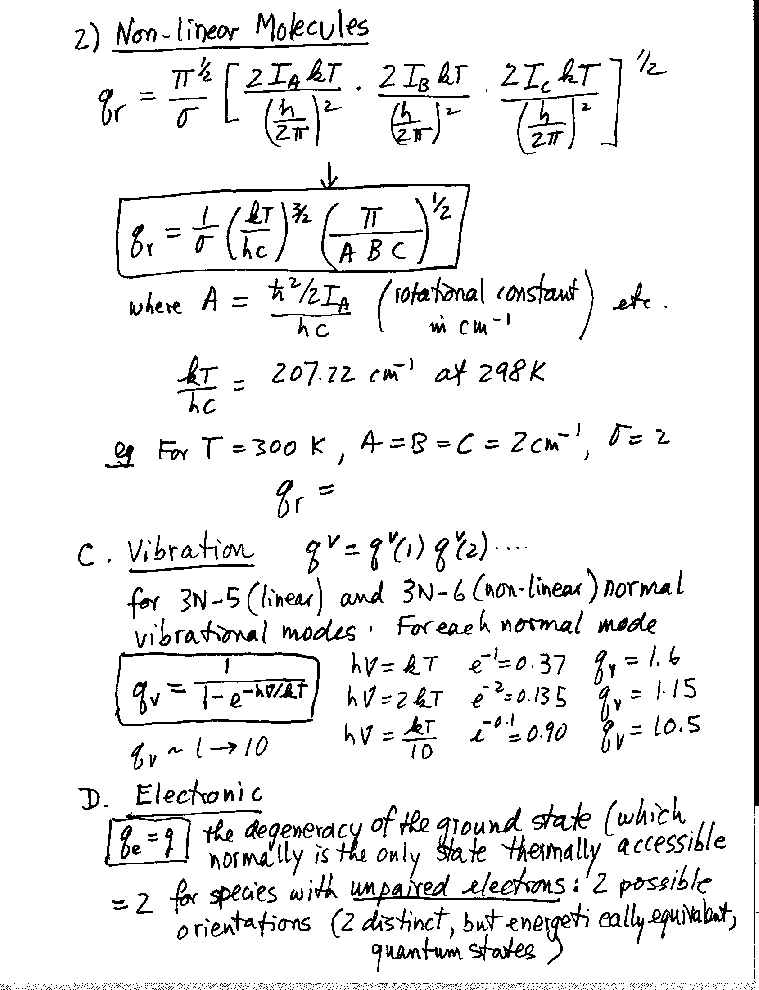
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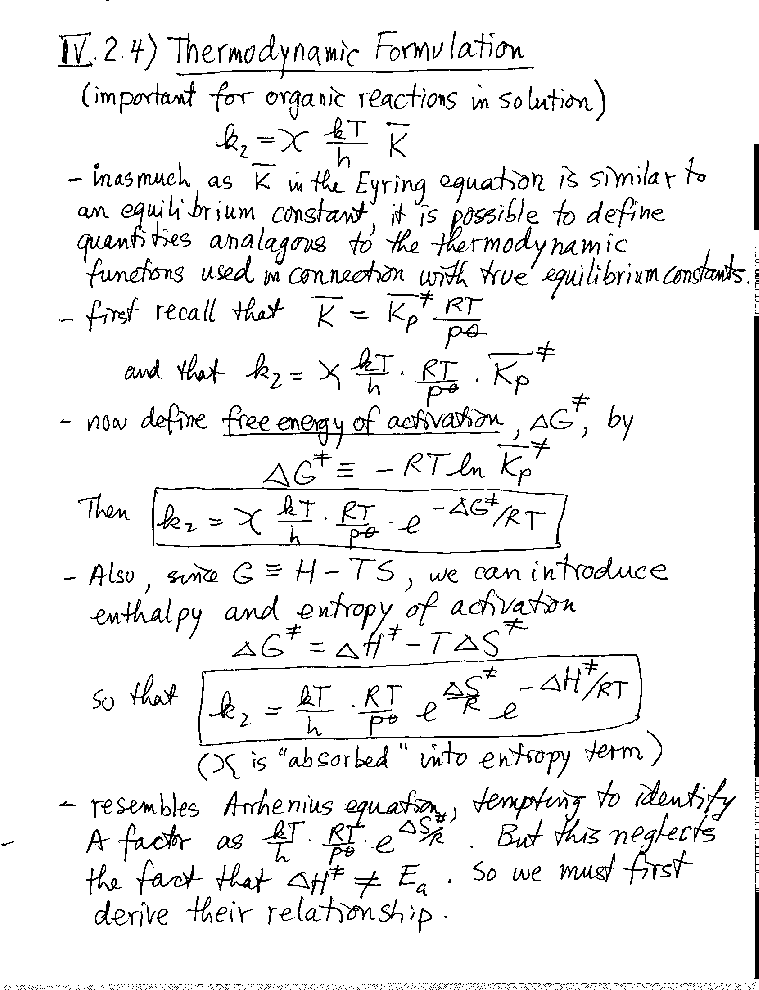
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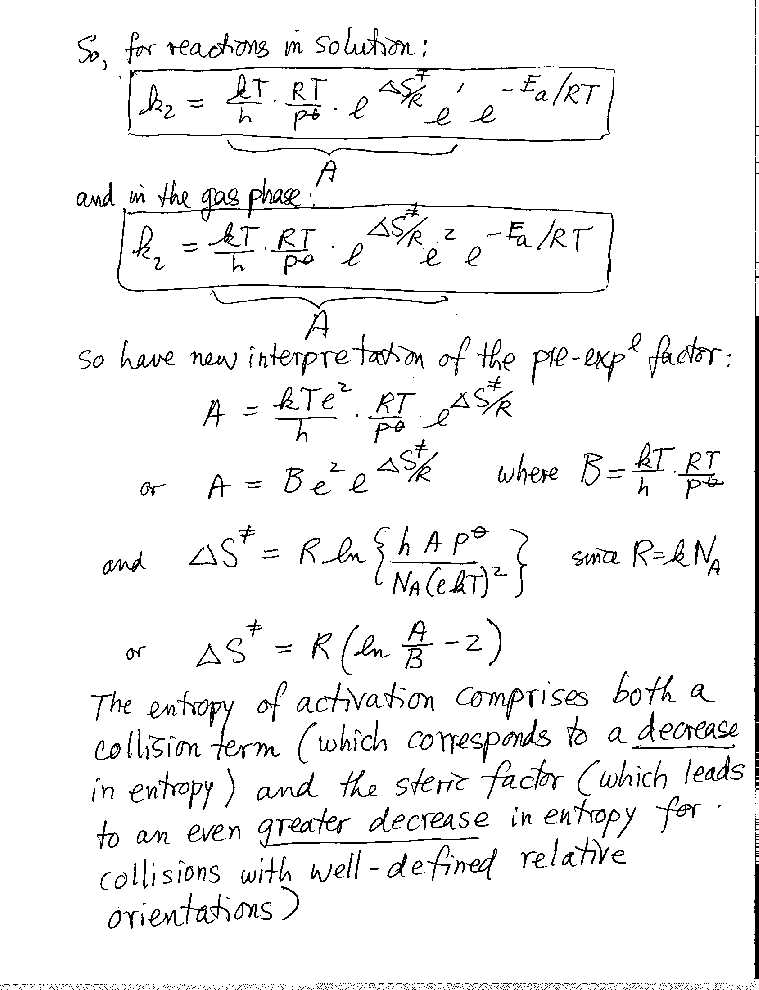
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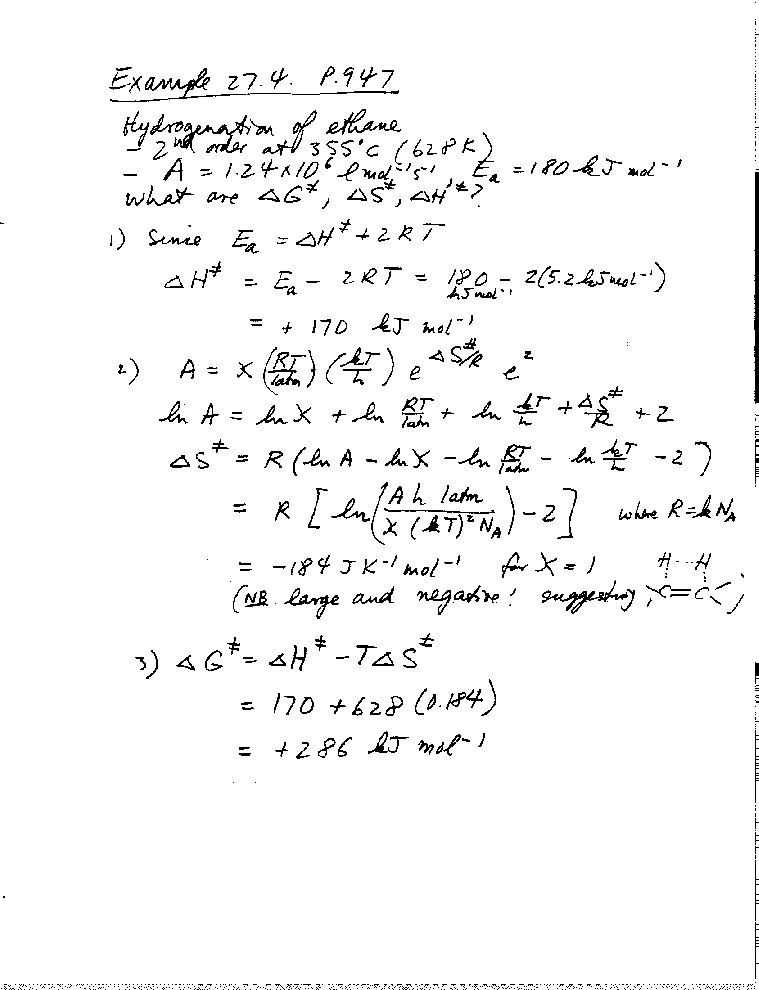
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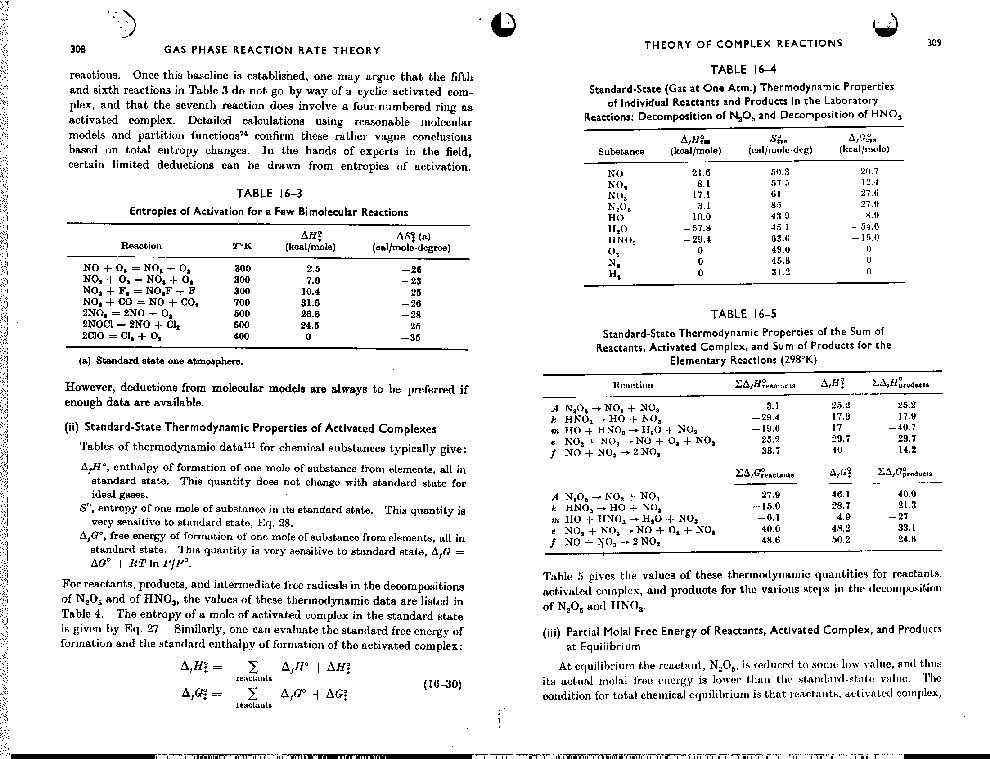
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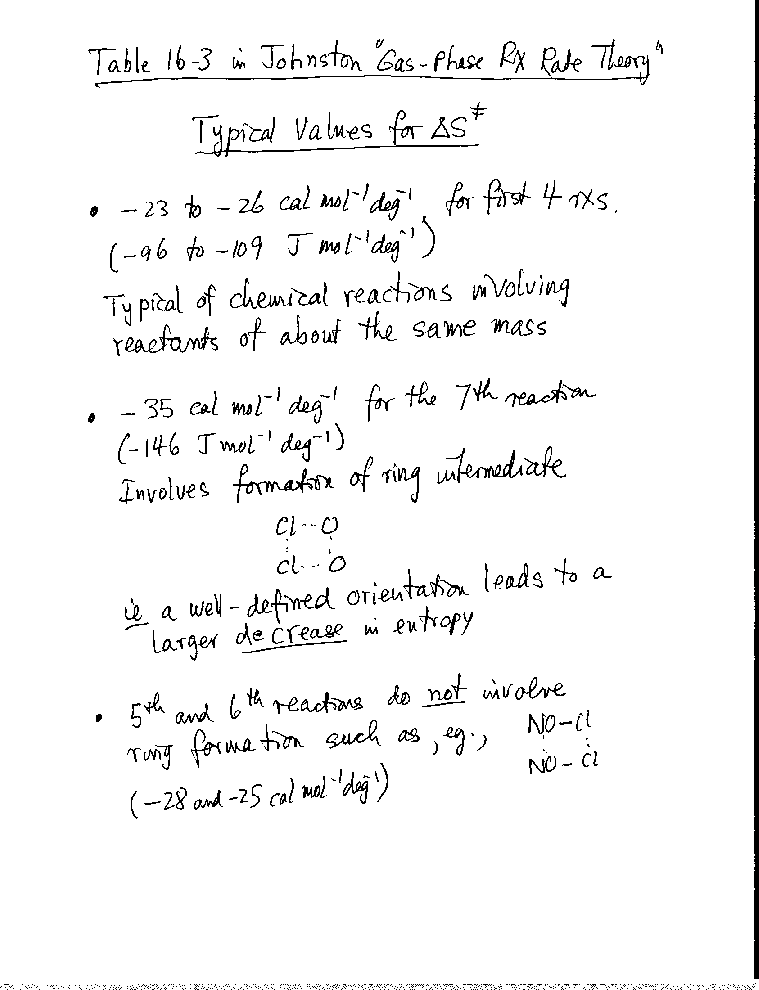
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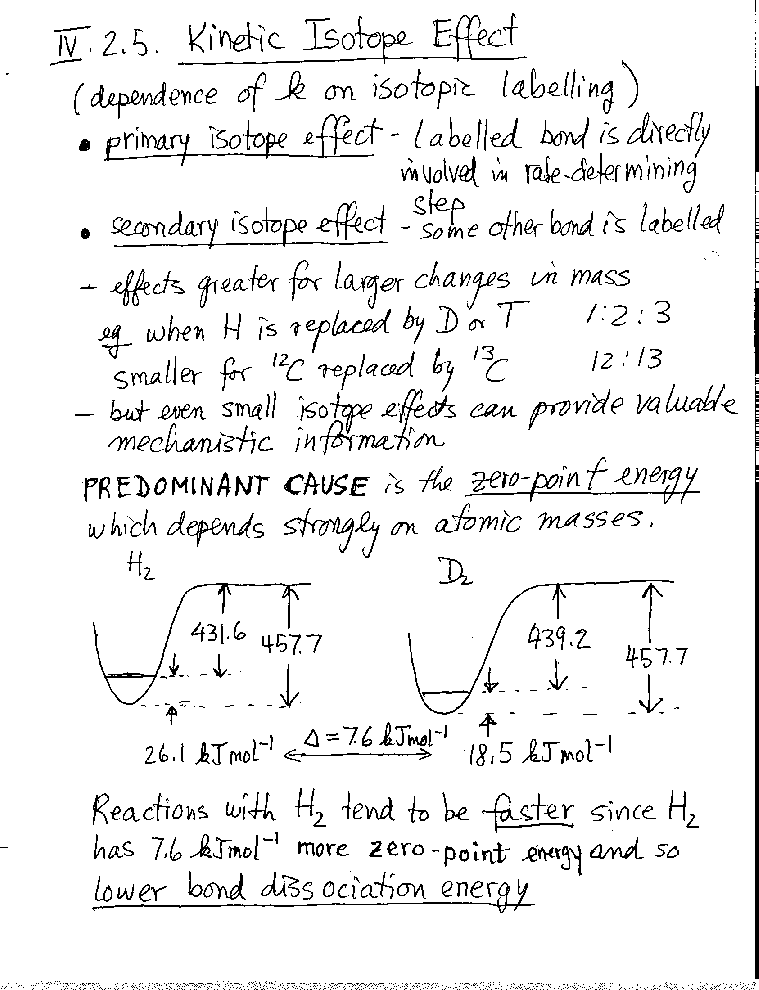
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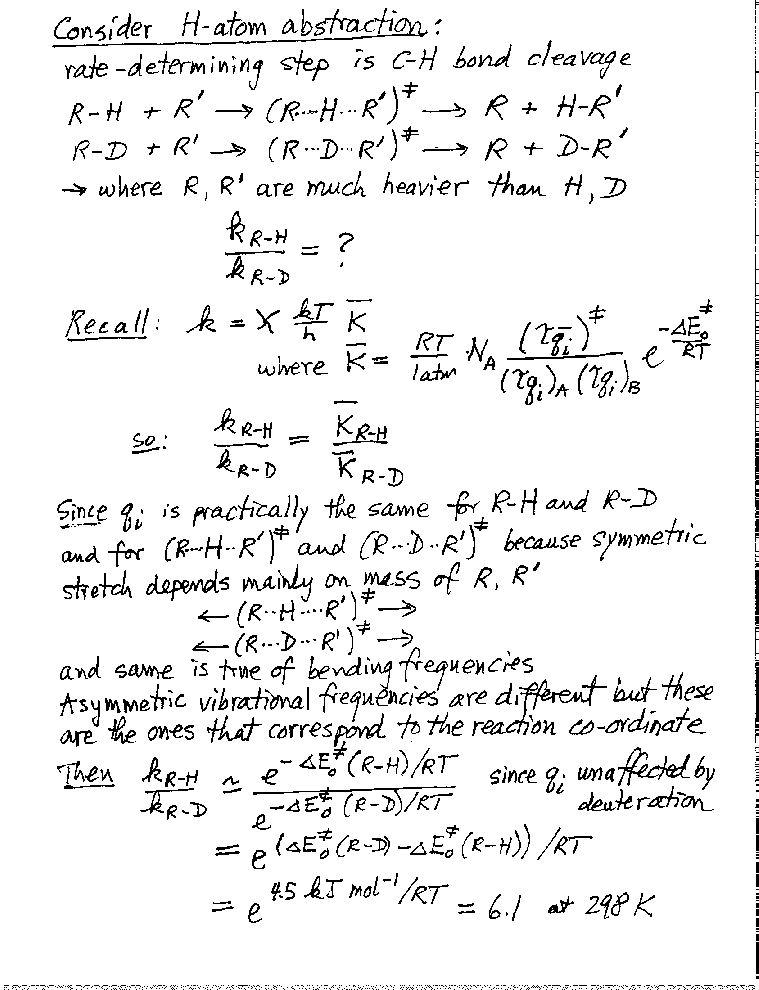
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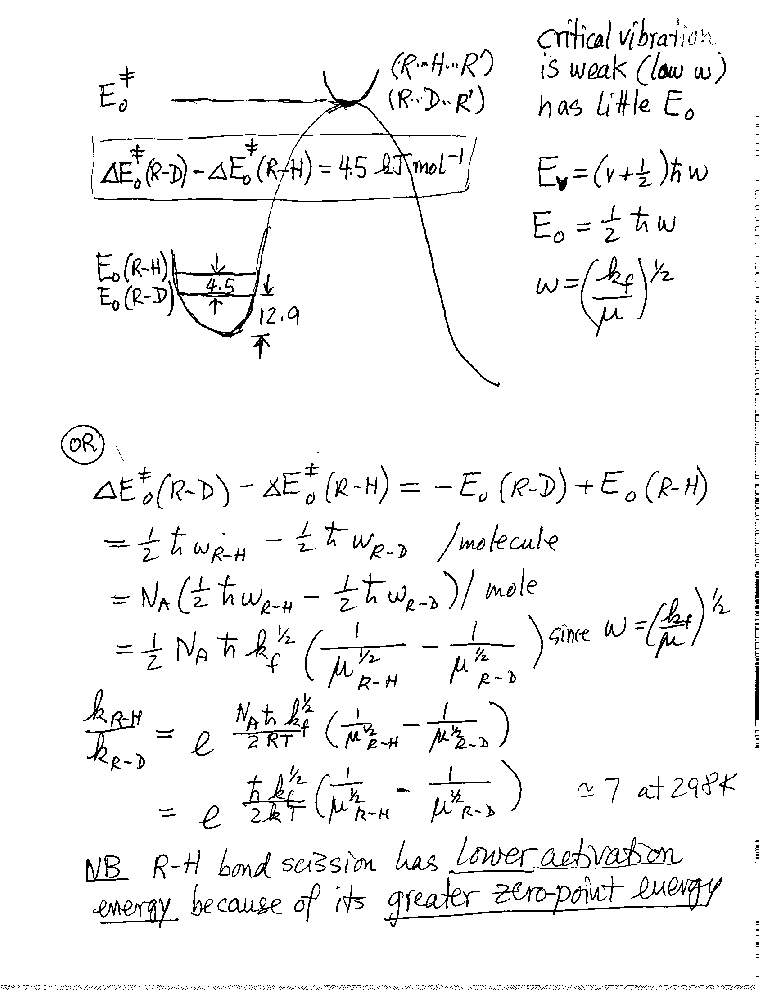
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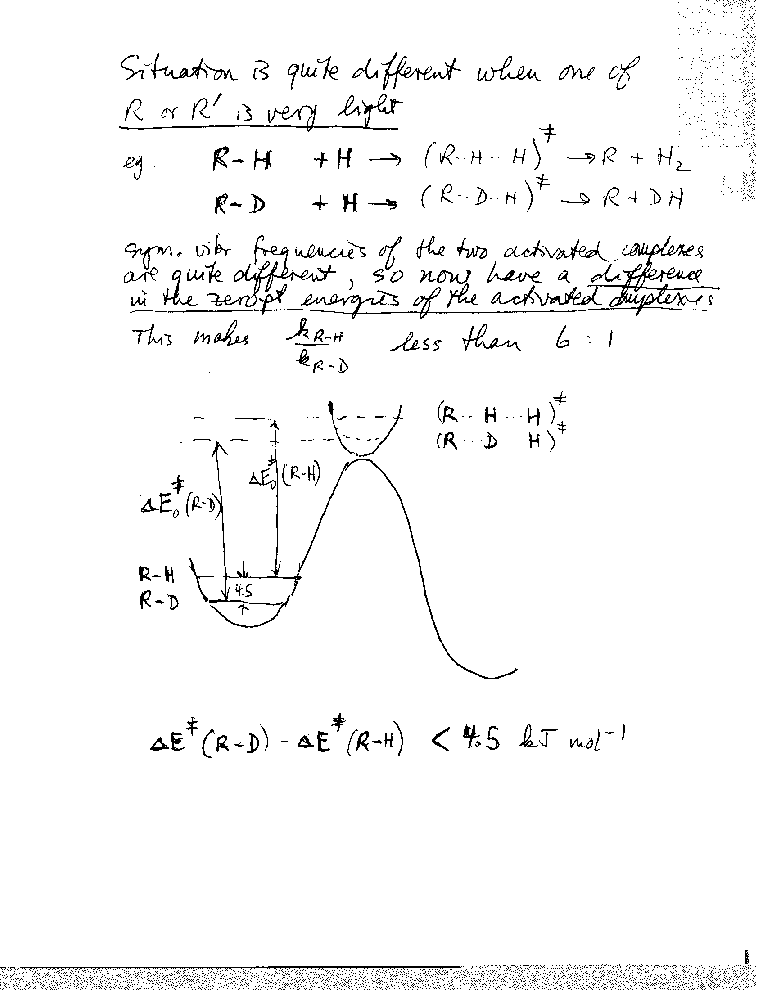
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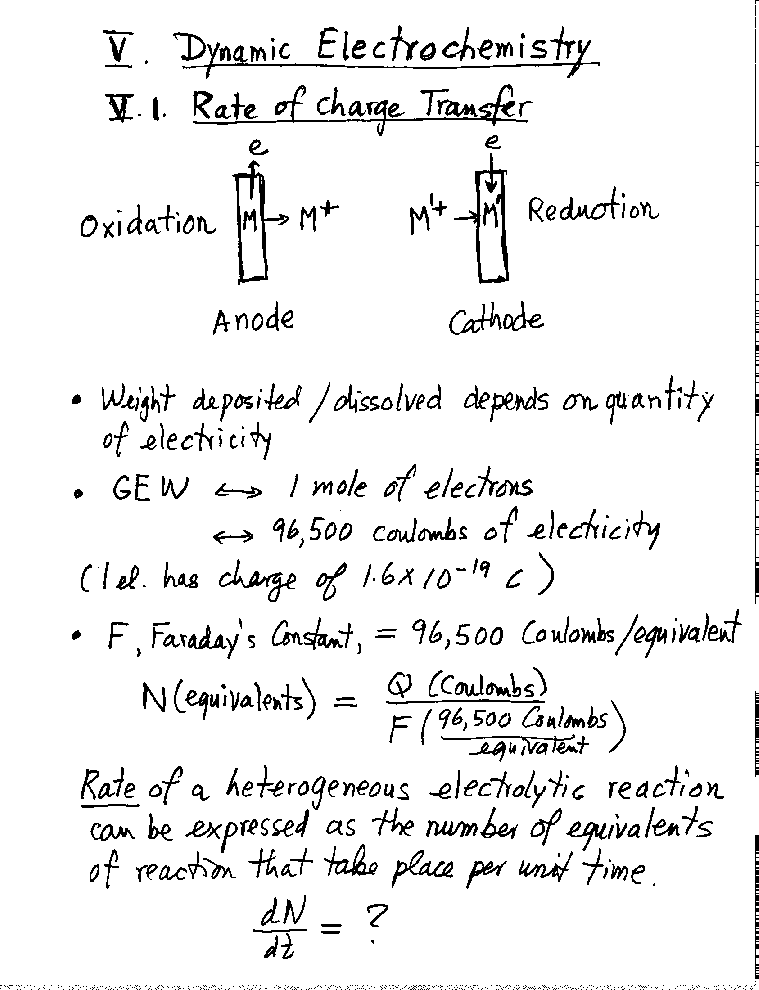
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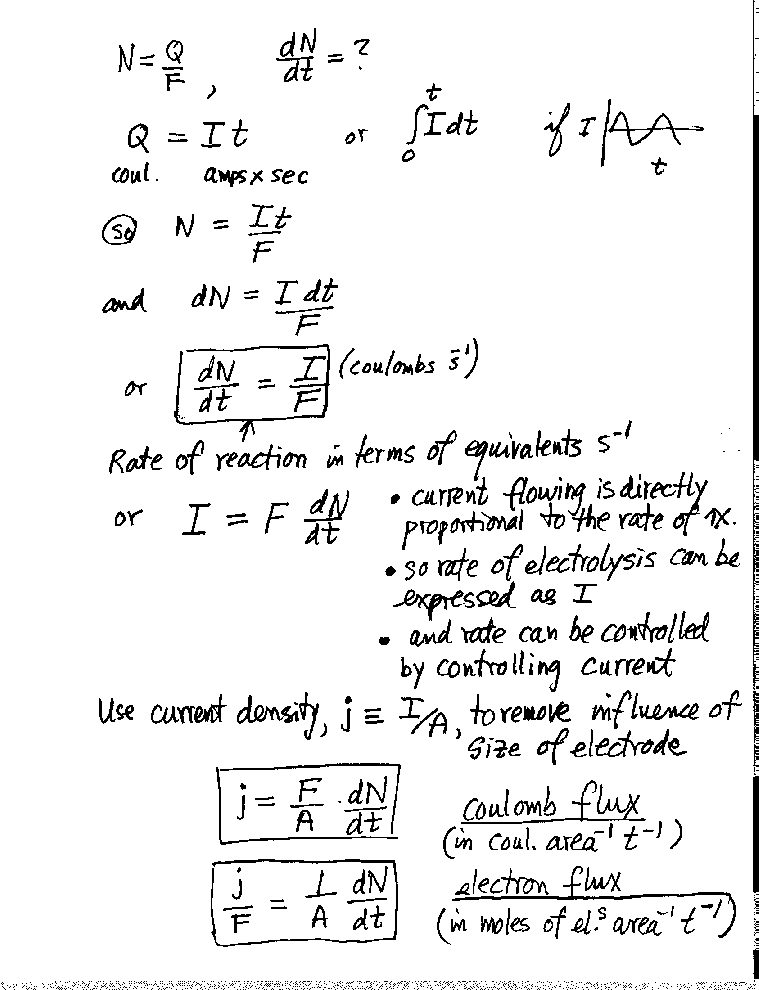
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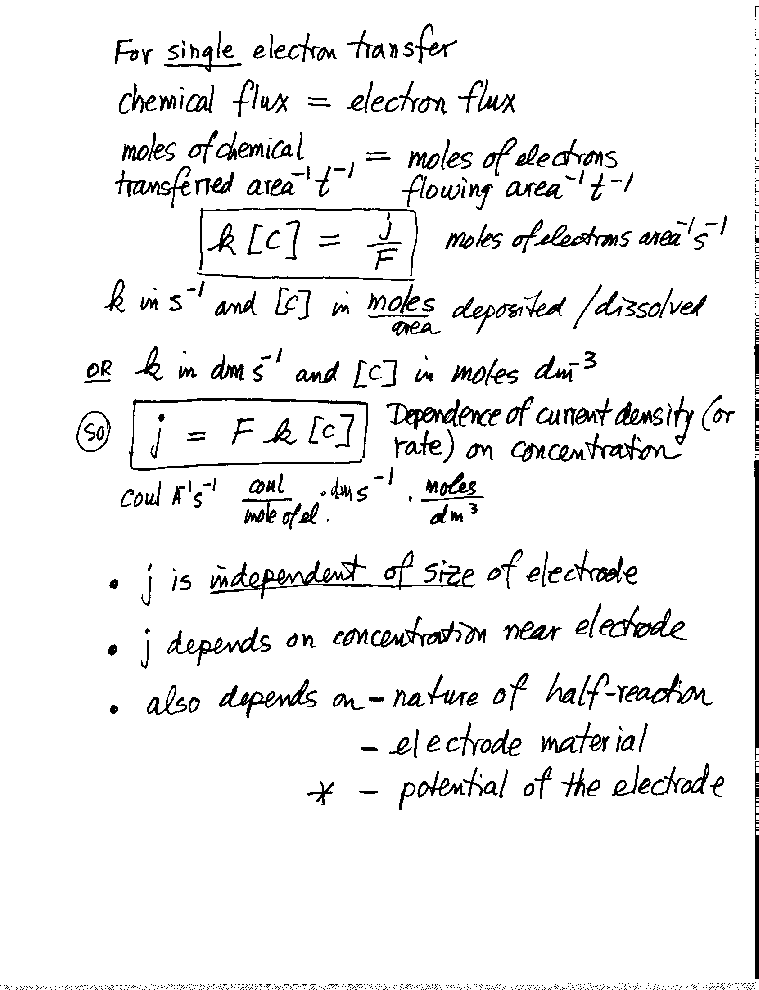
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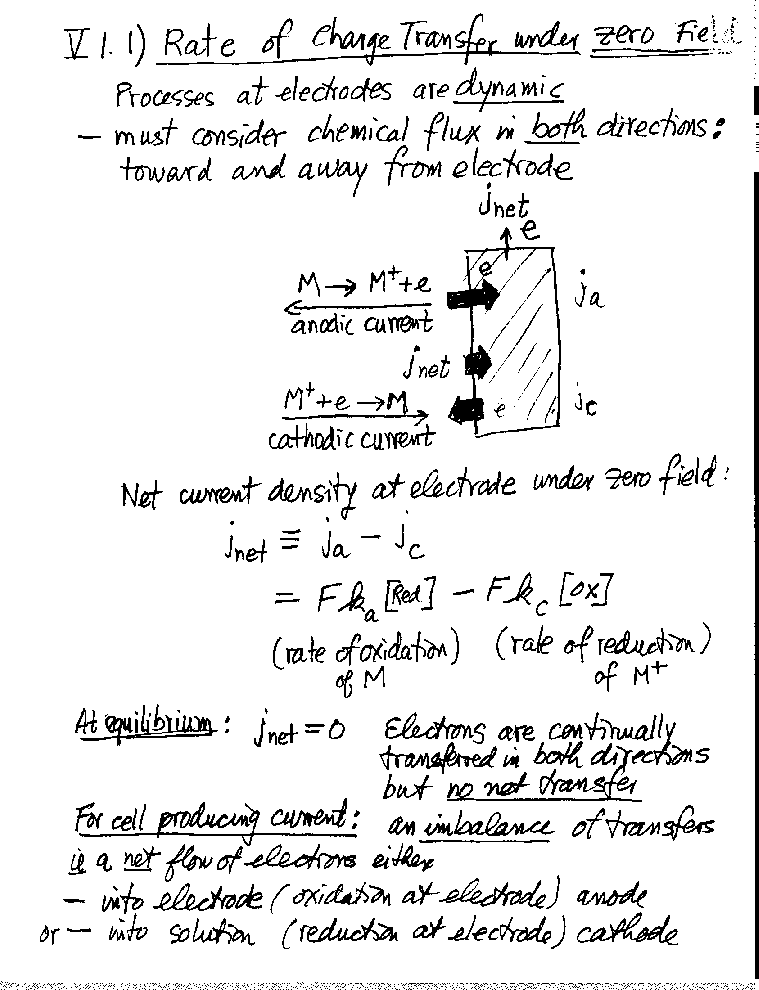
**LECTURE 13**

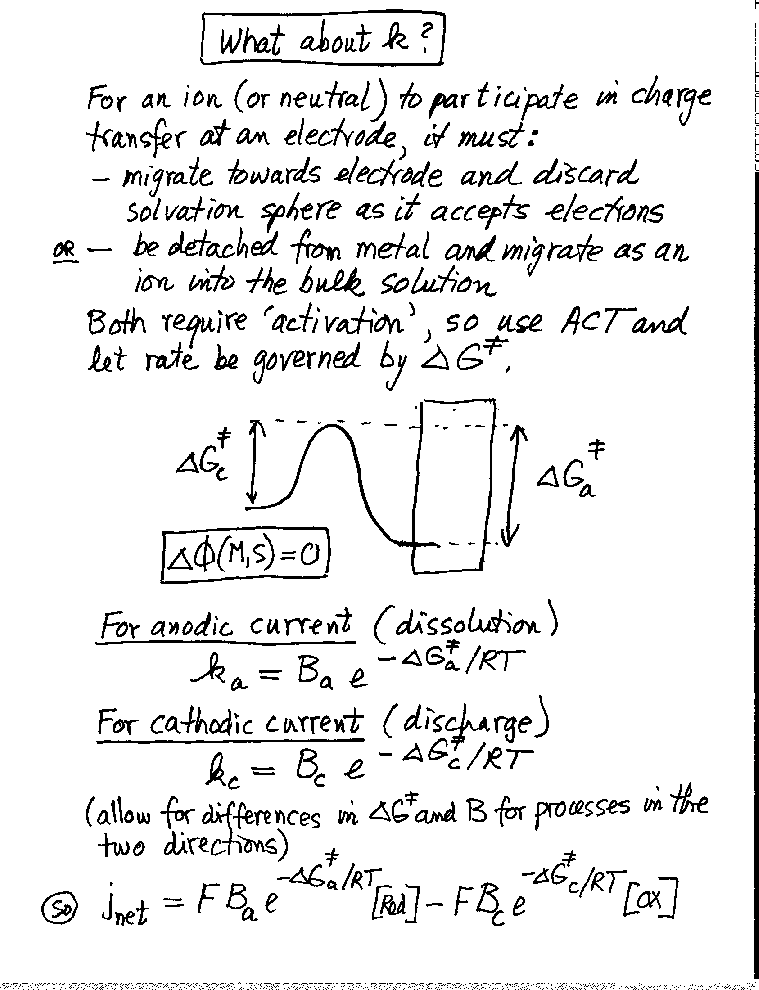
**RATE OF CHARGE TRANSFER. THE DOUBLE LAYER AT THE INTERFACE: HELMHOLTZ, GOUY-CHAPMAN, AND STERN MODELS. THE RATE OF CHARGE TRANSFER UNDER ZERO FIELD: THE CHEMICAL RATE CONSTANT. THE BUTLER-VOLMER EQUATION: TWO LIMITING FORMS, TAFEL PLOTS. CONCENTRATION POLARIZATION. APPLICATION IN POLAROGRAPHY.**

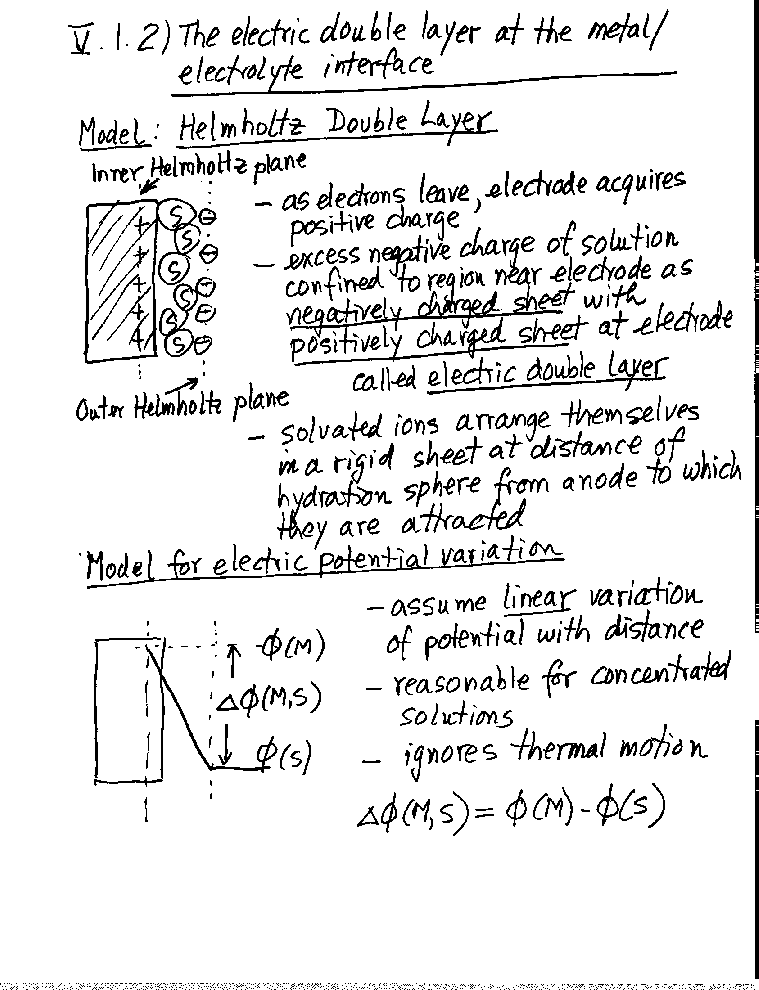
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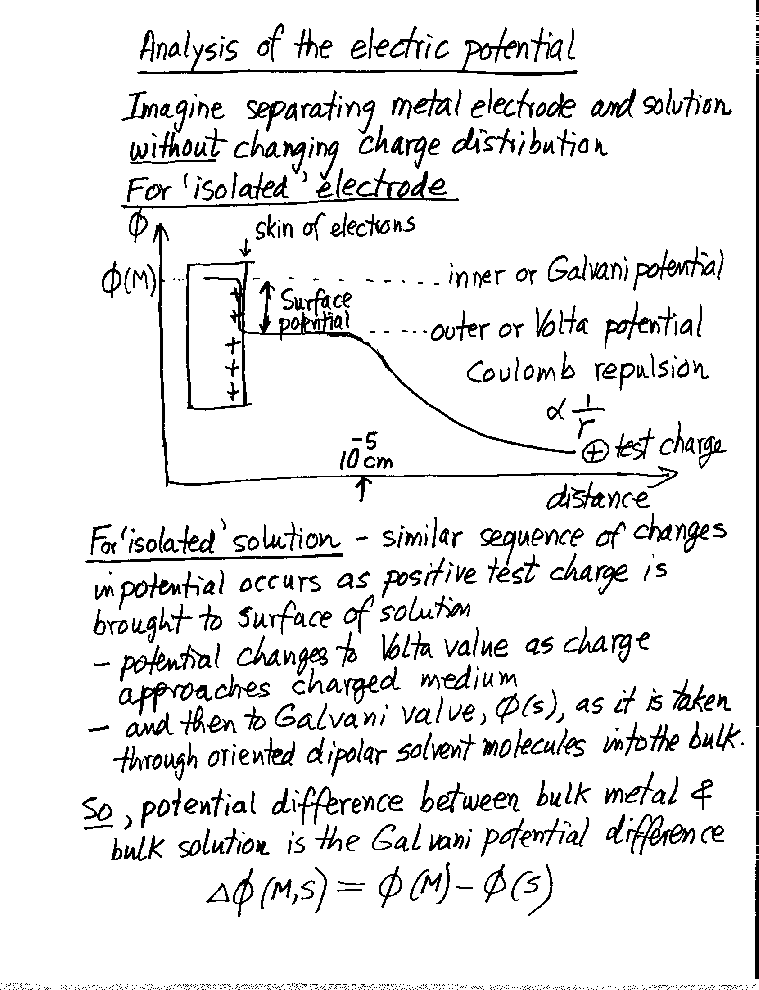
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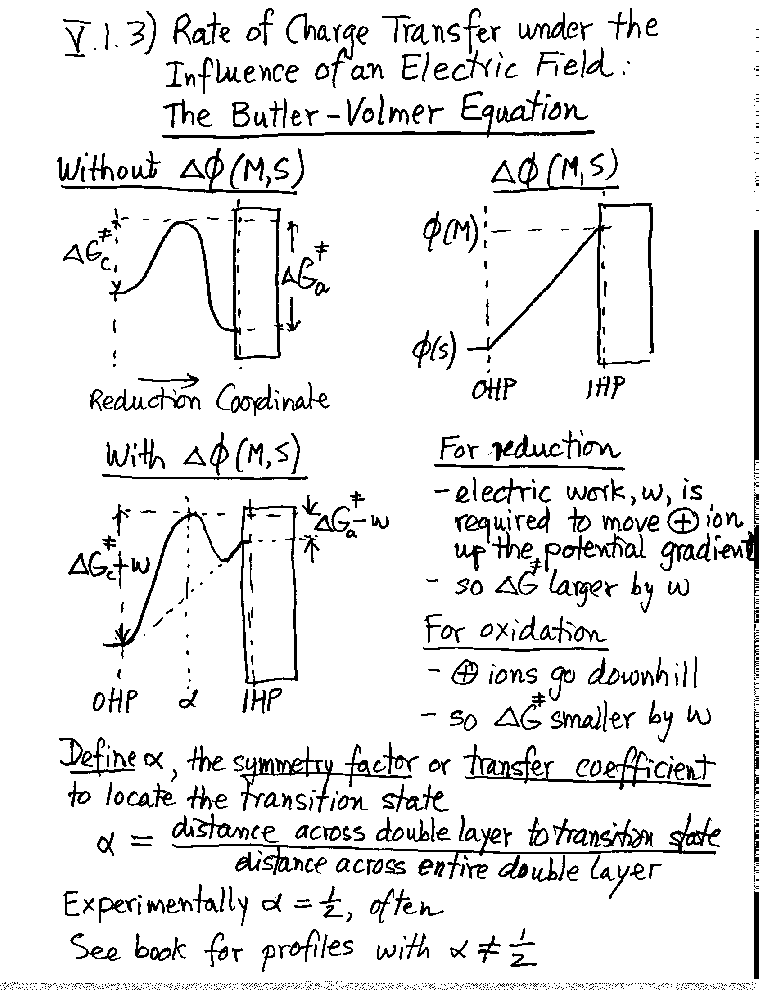
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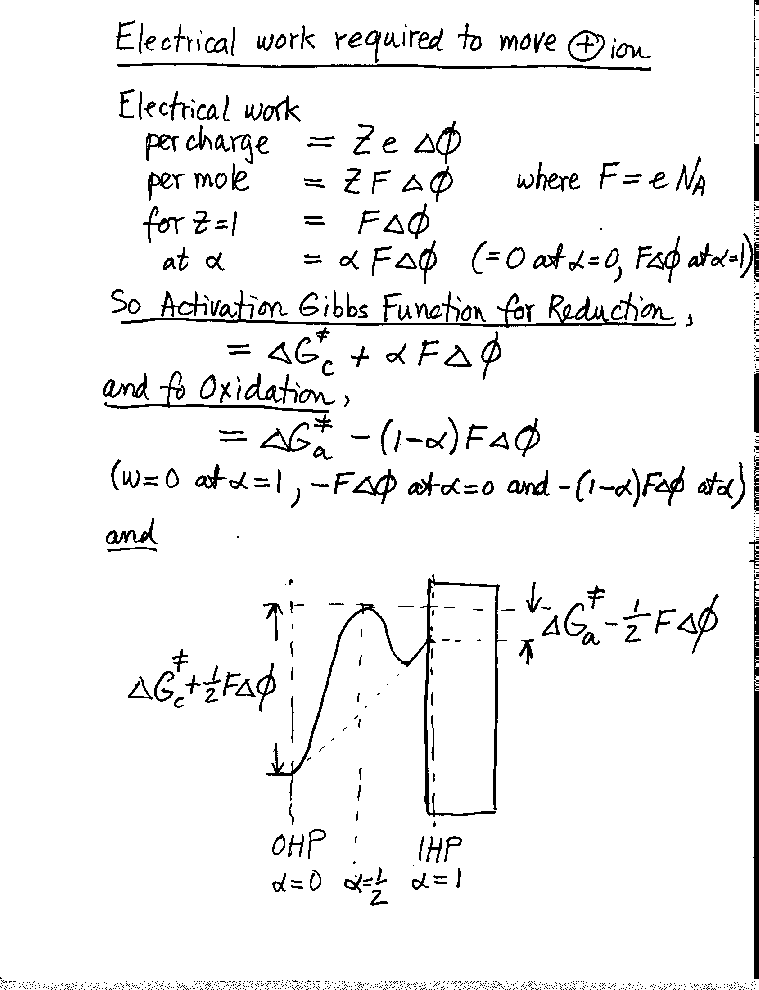
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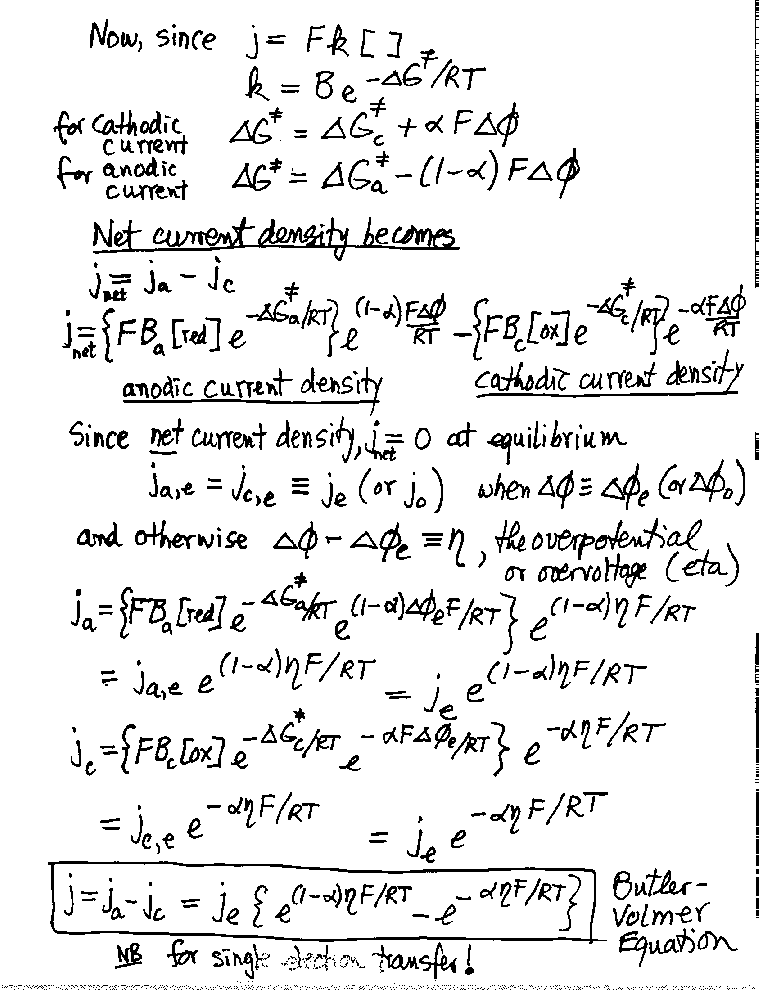
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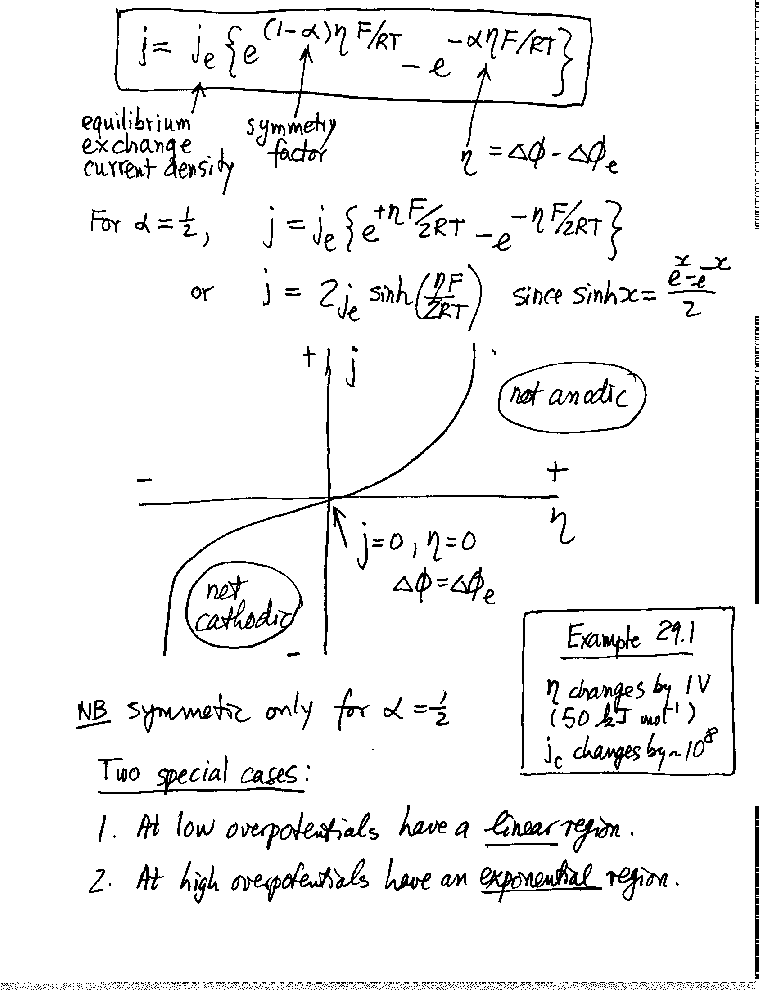
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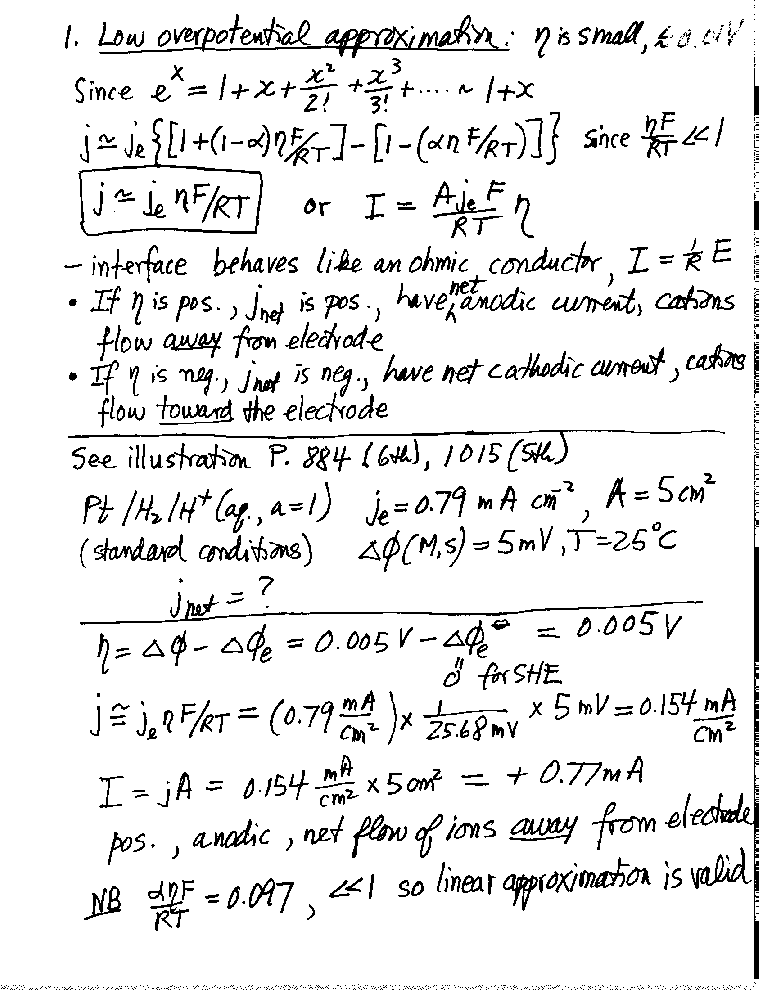
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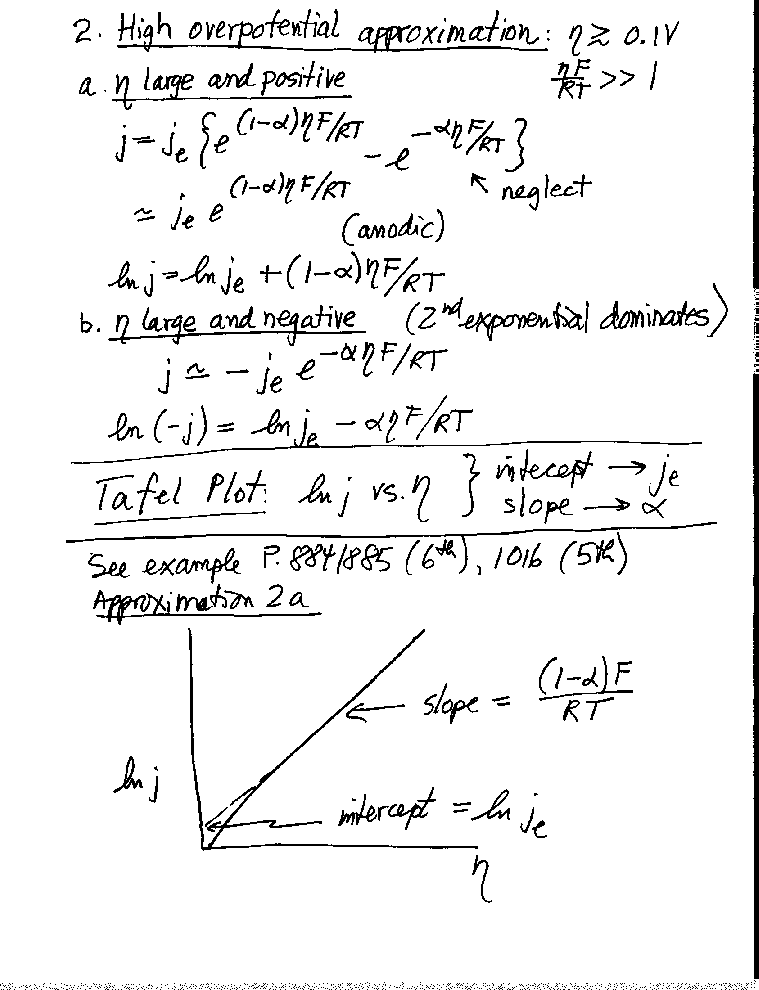
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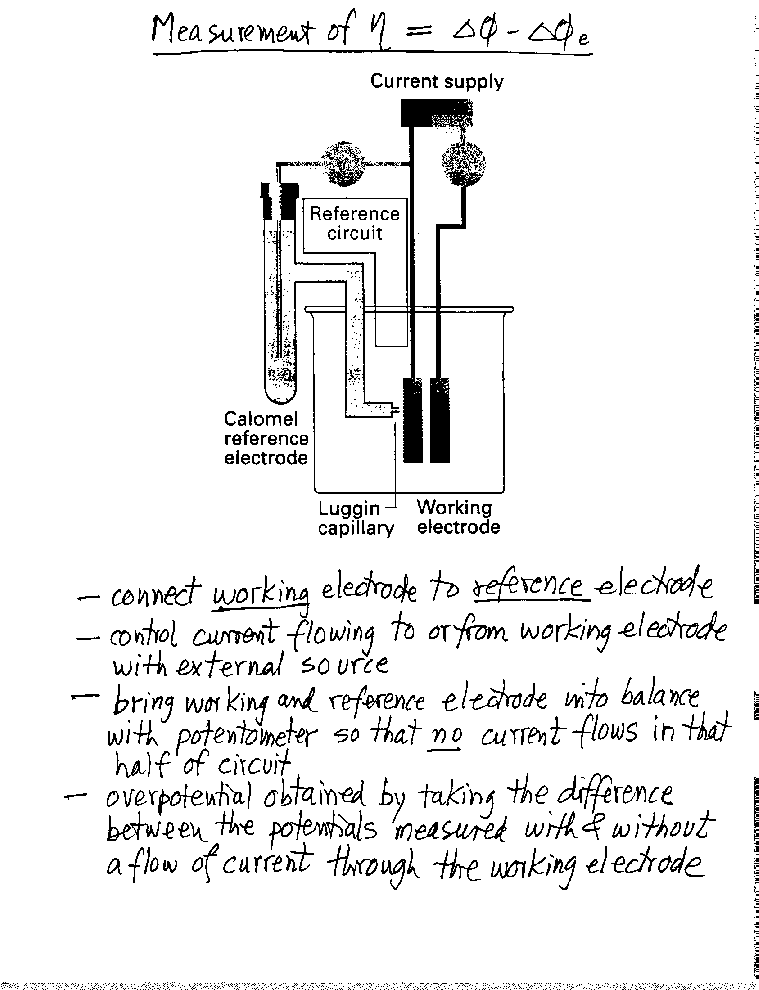
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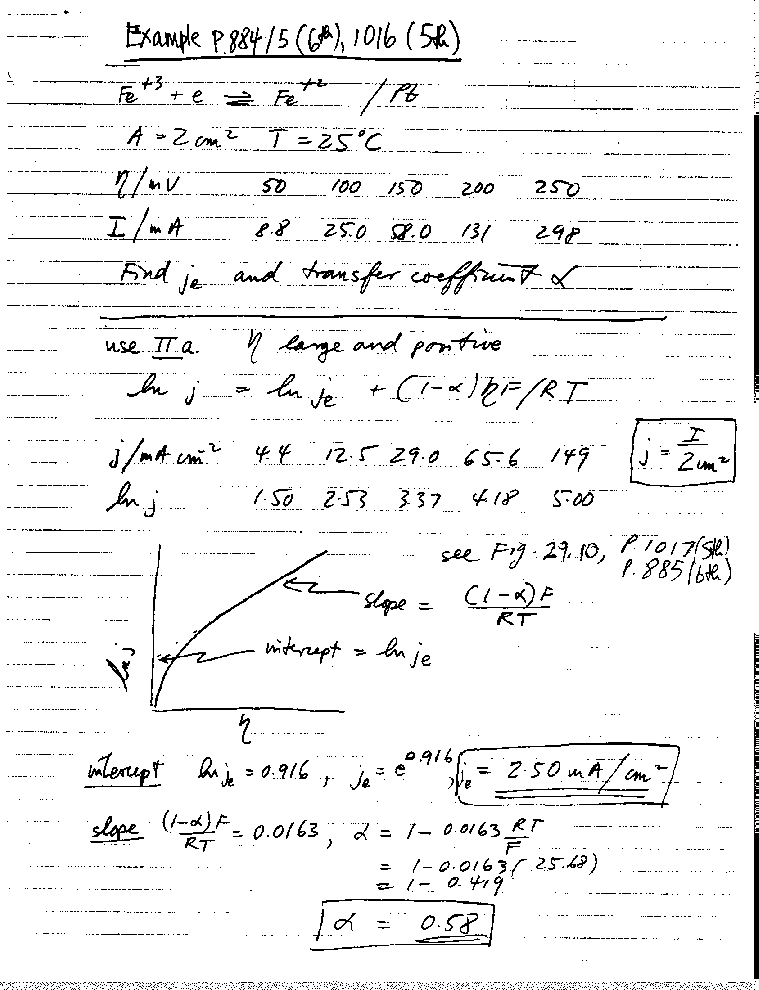
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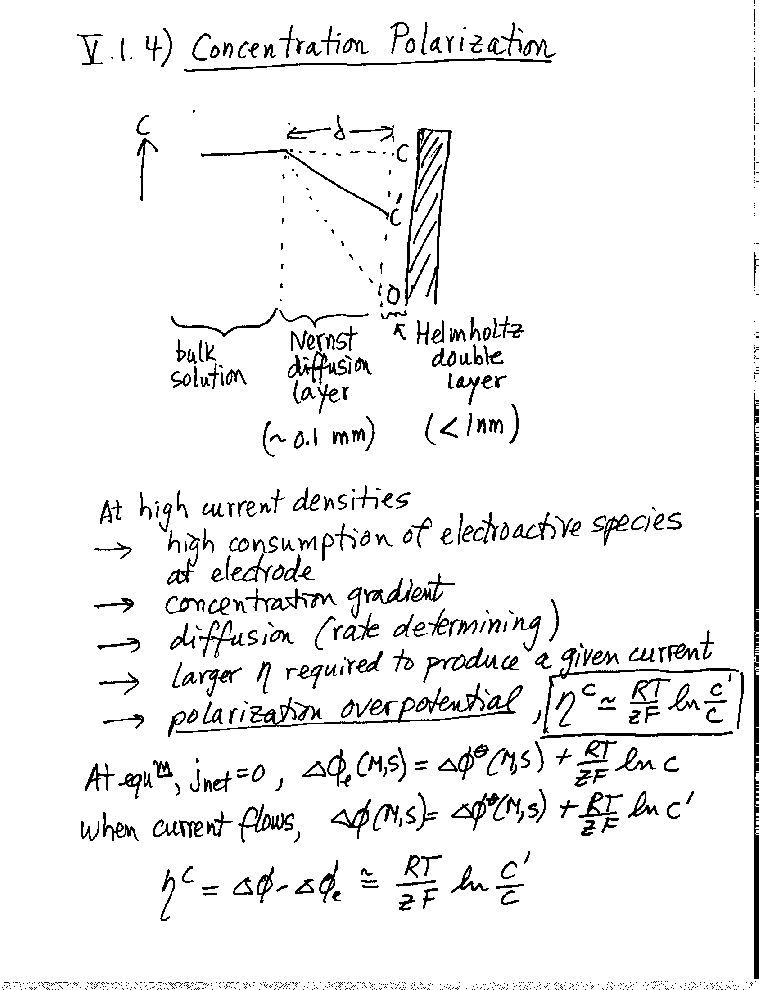
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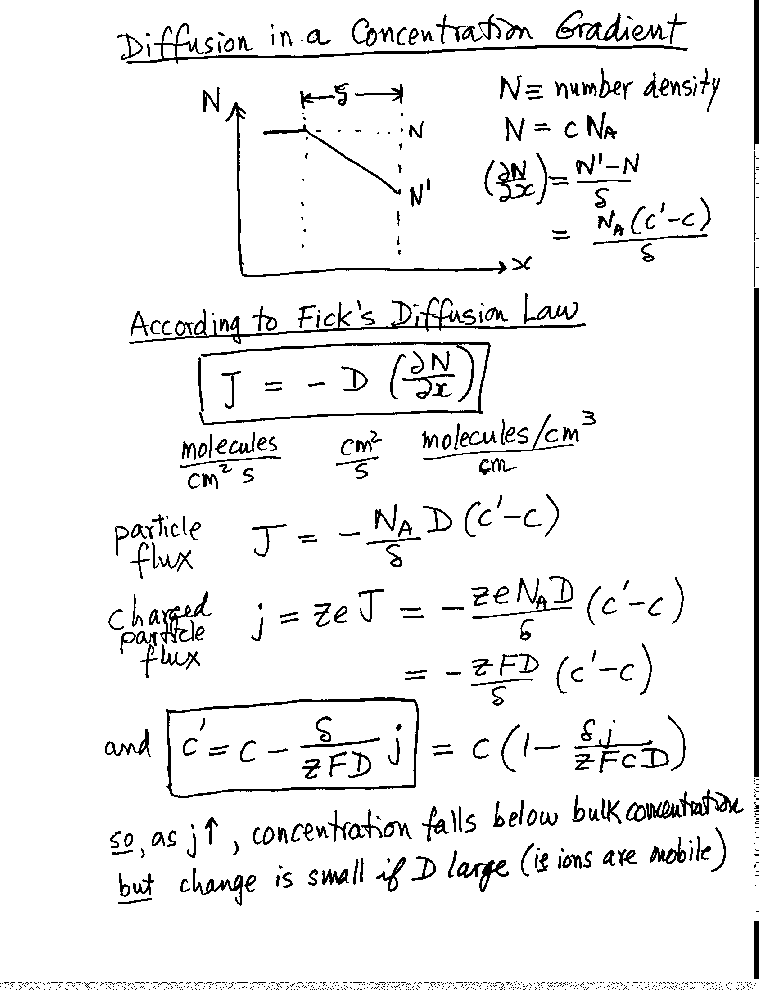
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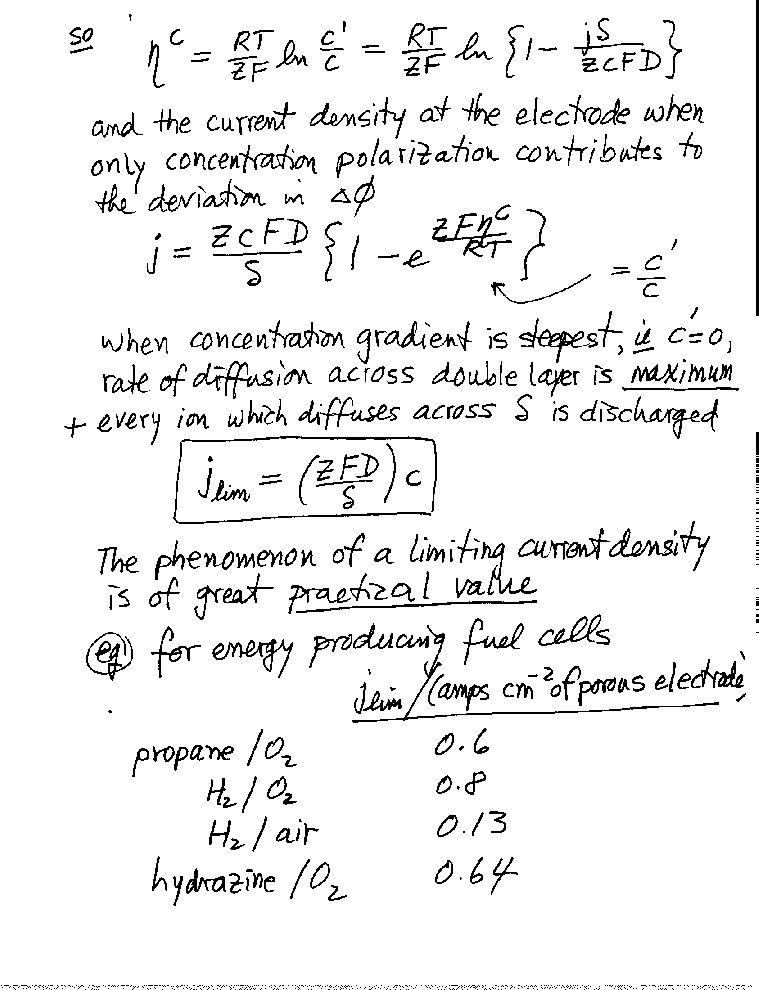
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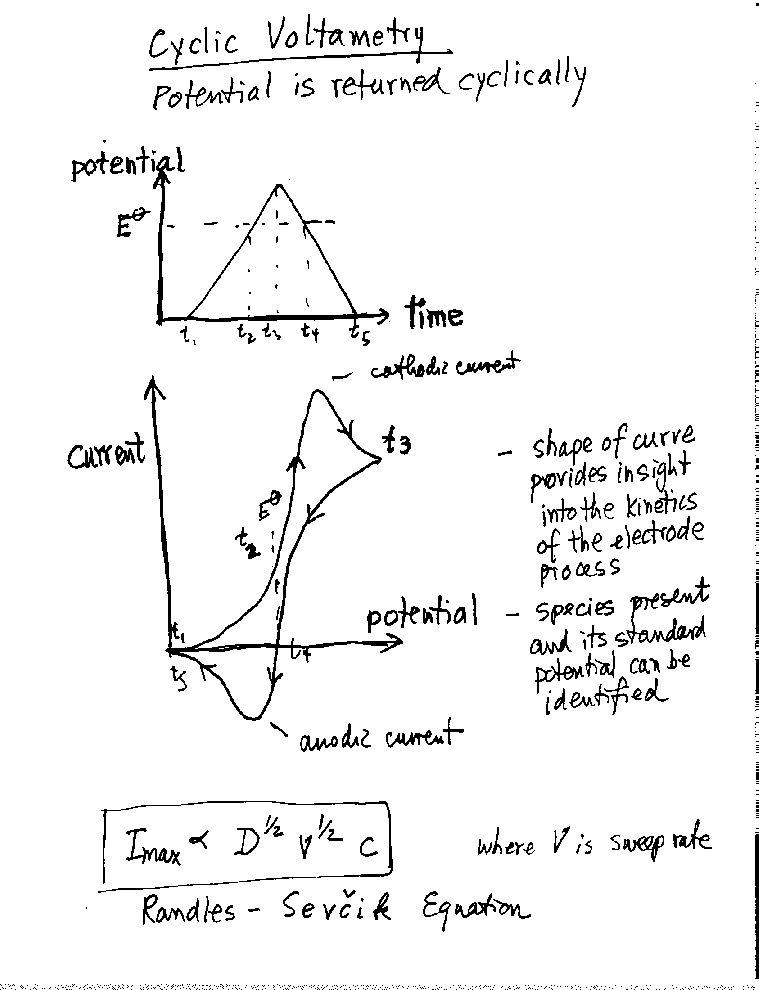
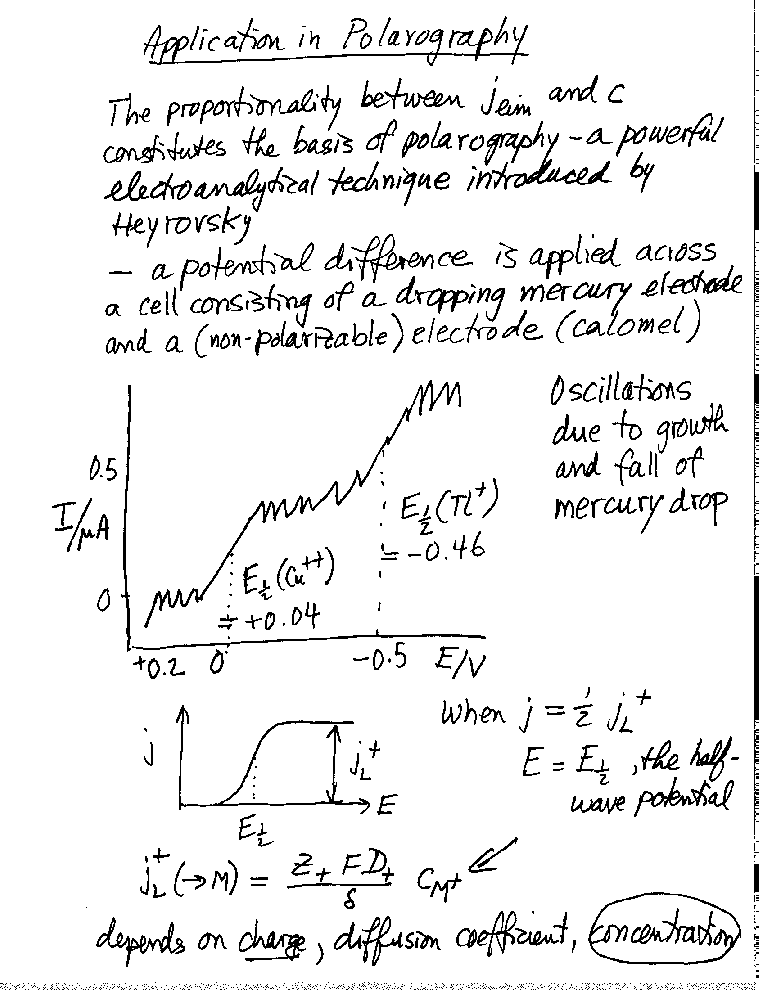
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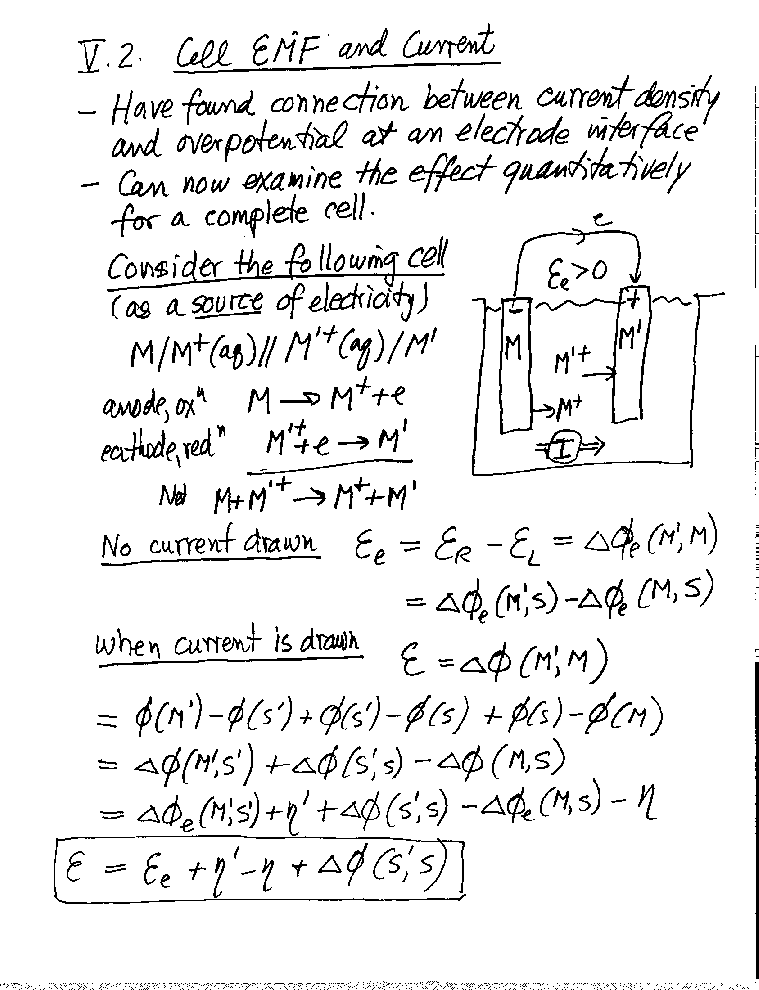
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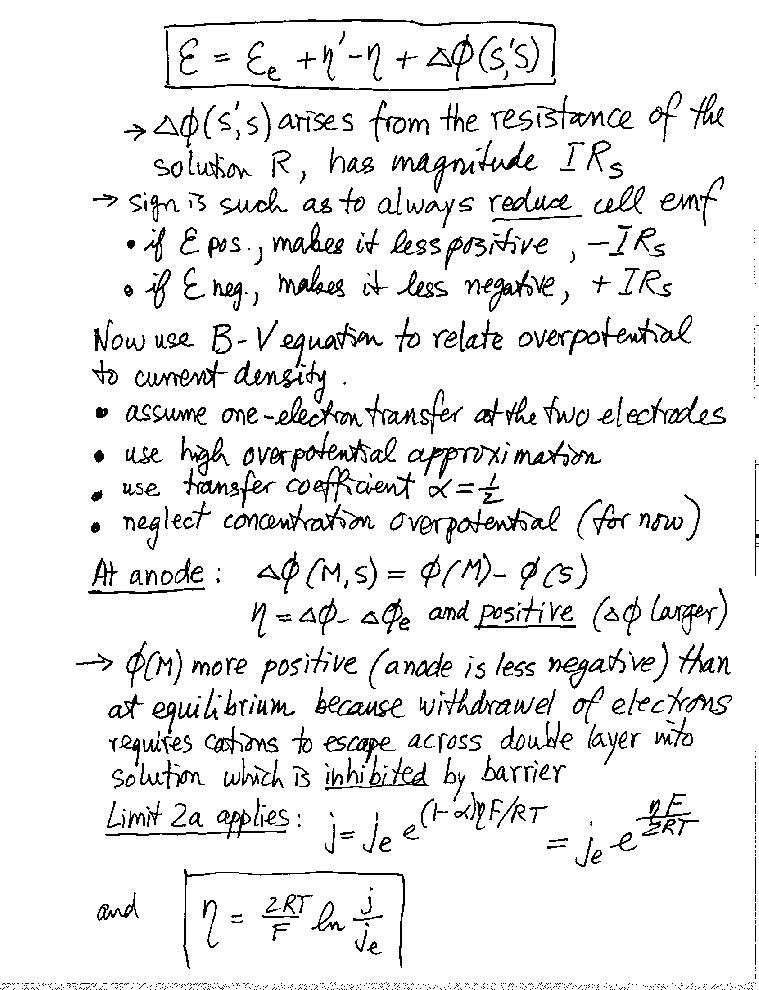
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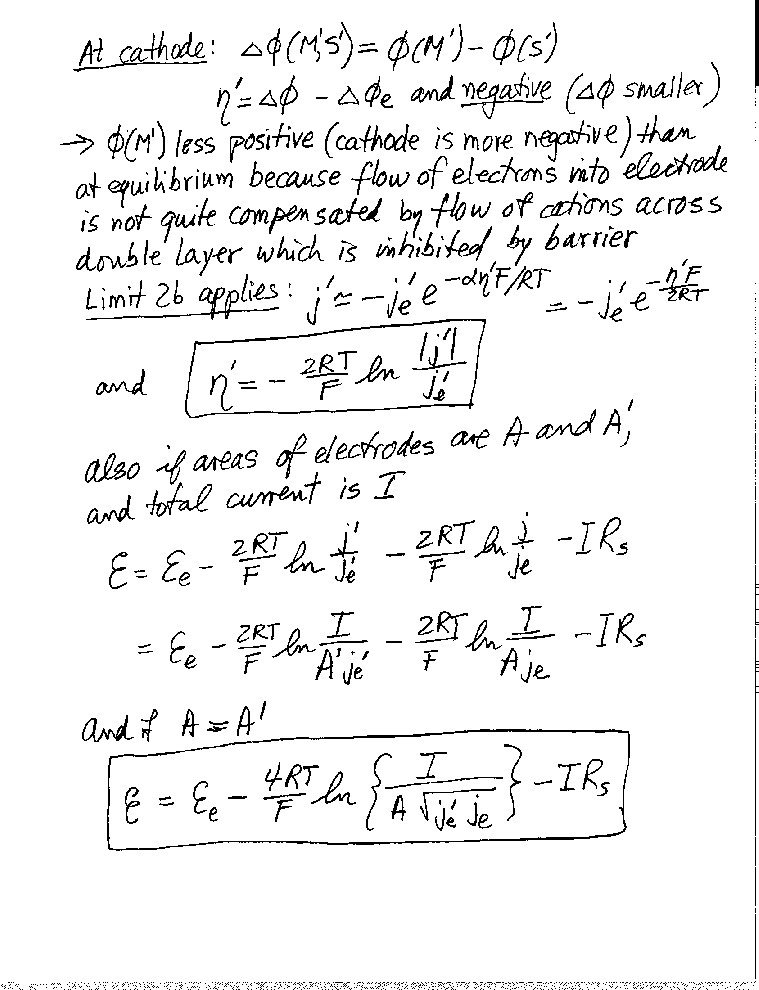
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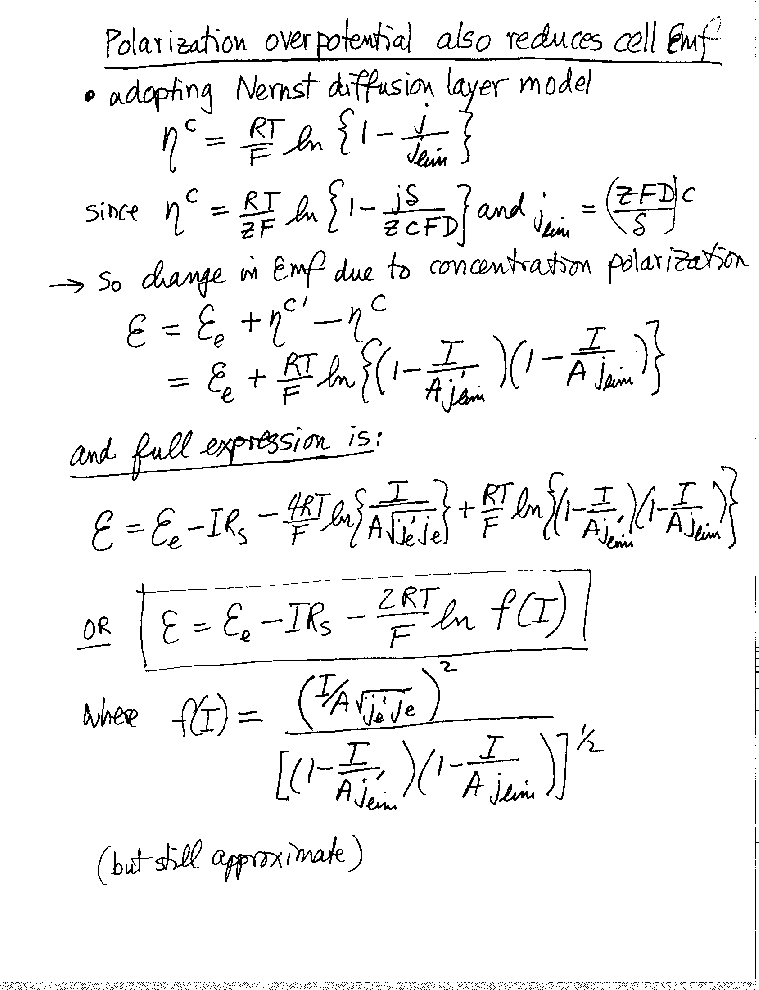
**LECTURE 14**

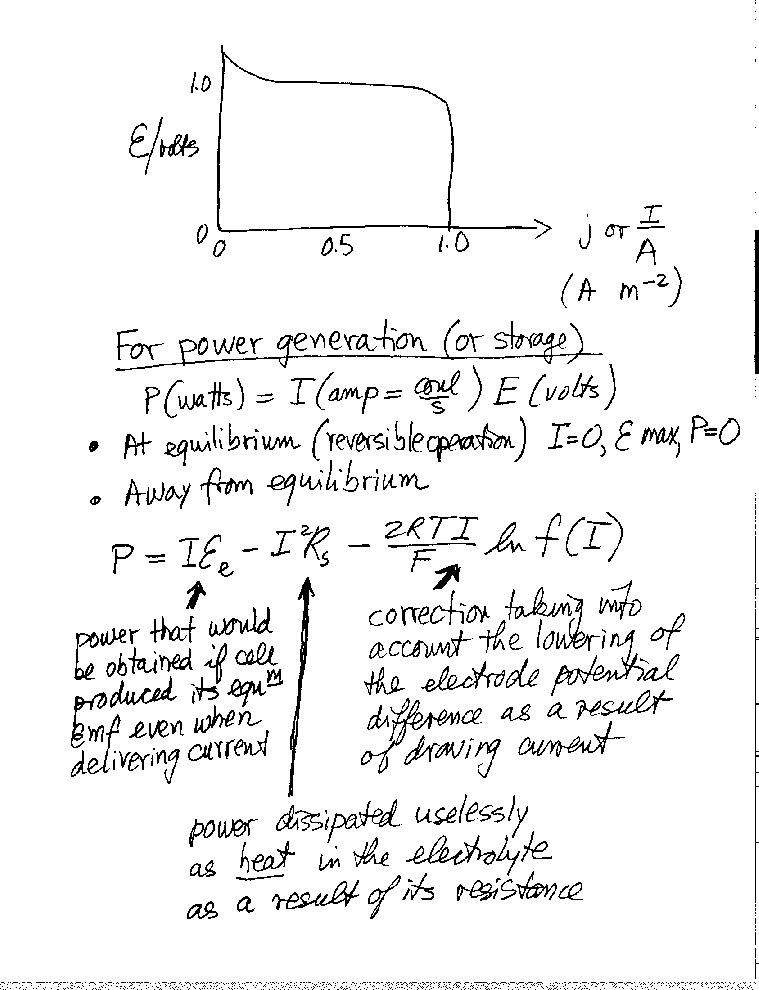
**CELL EMF AND ELECTRIC CURRENT**

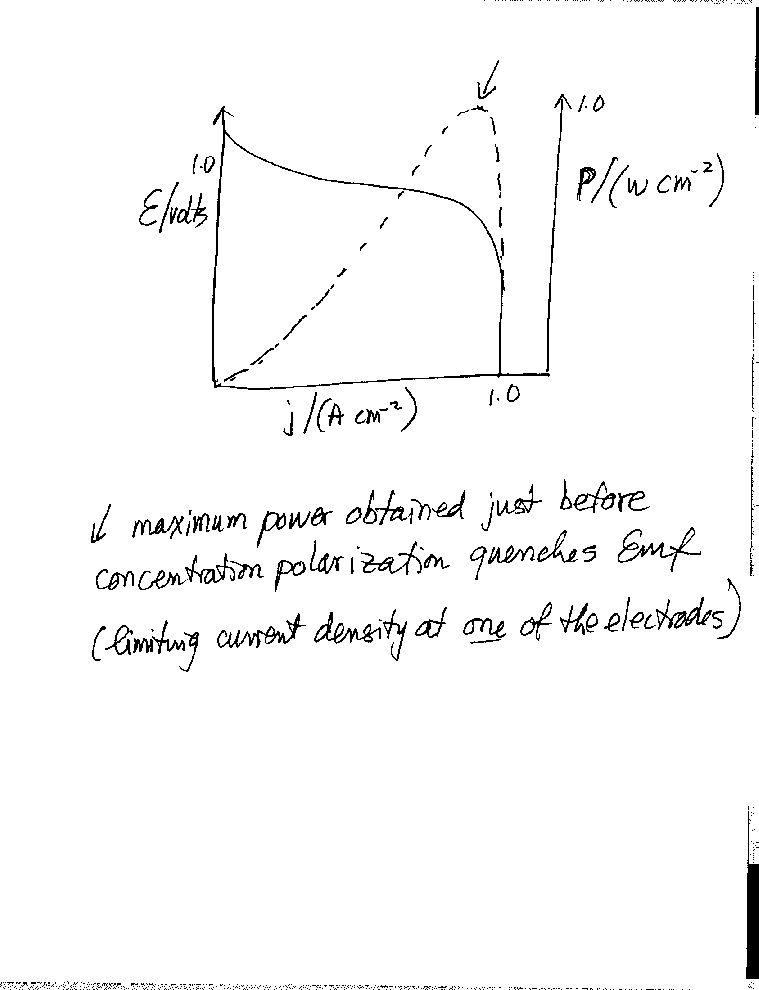
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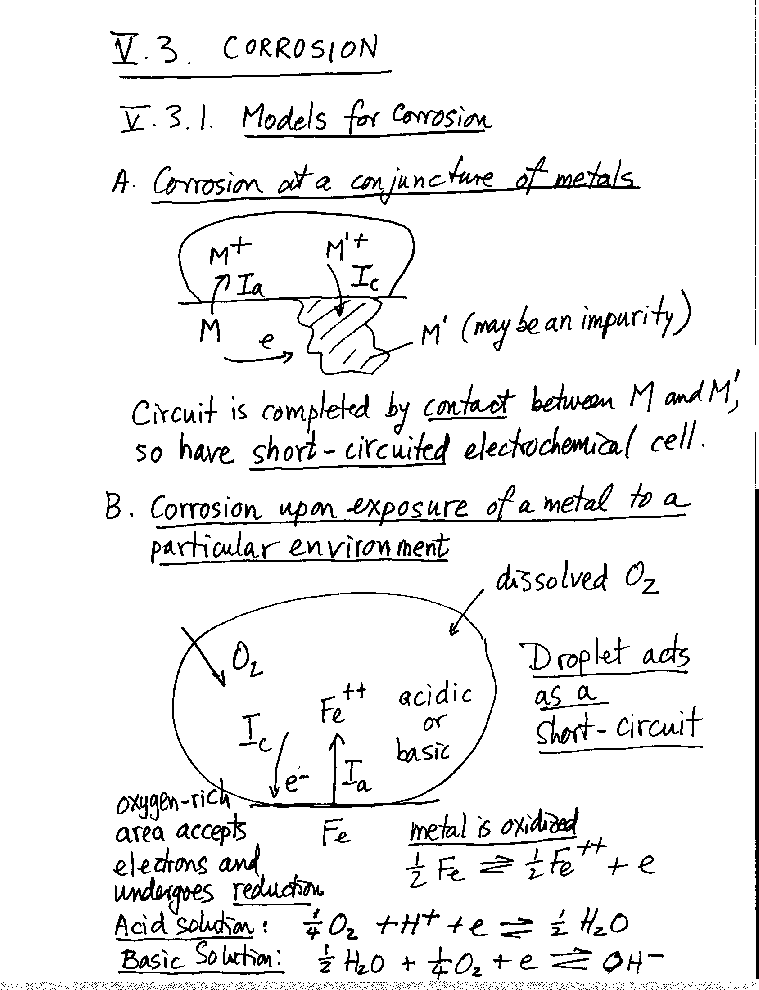
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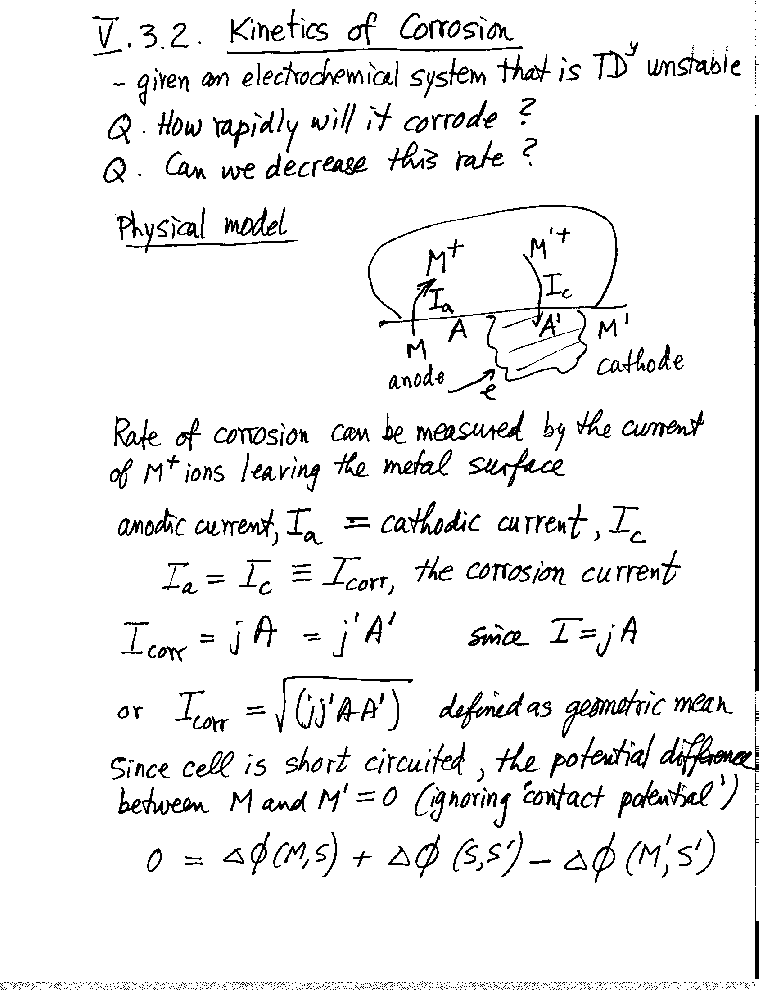
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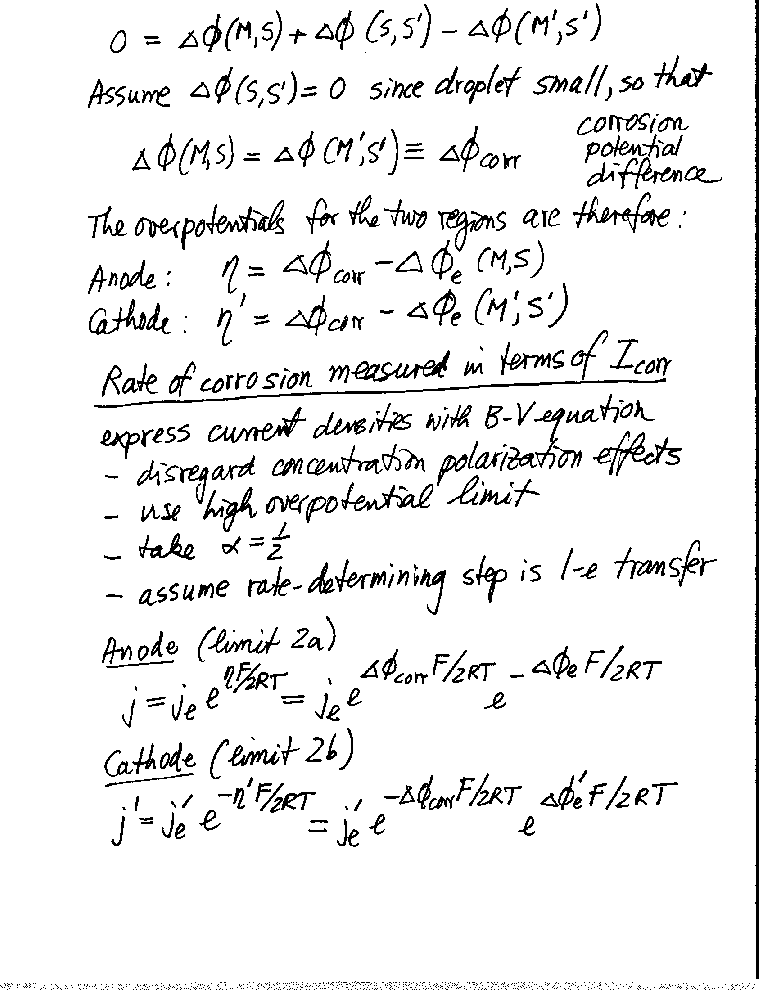
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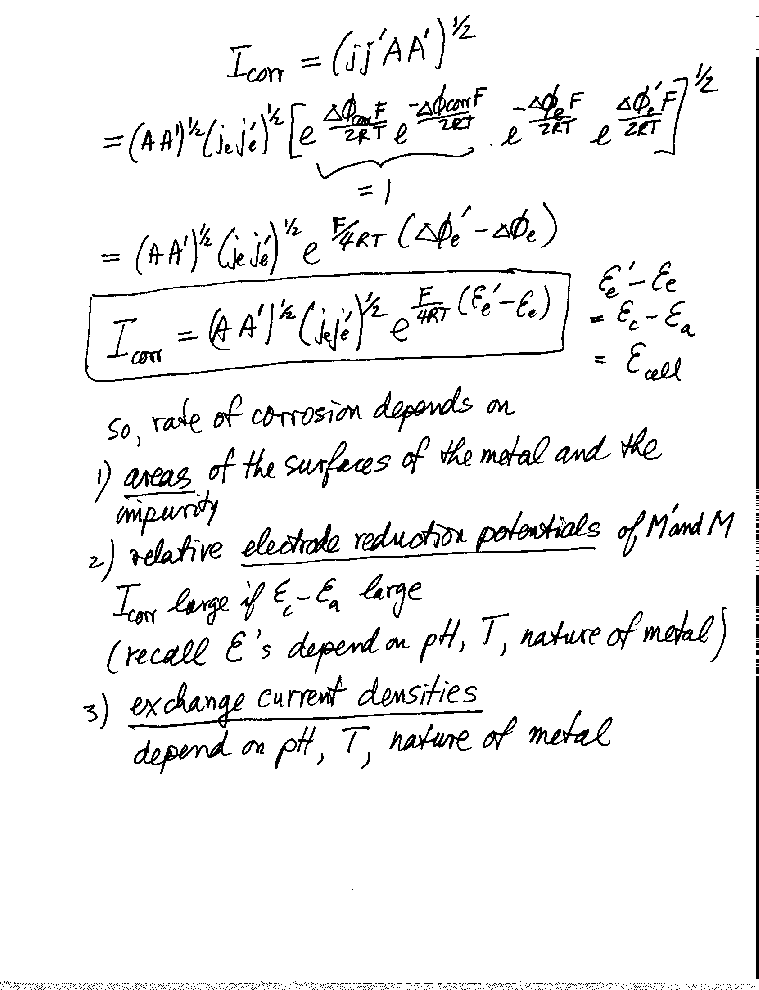
**LECTURE 15**

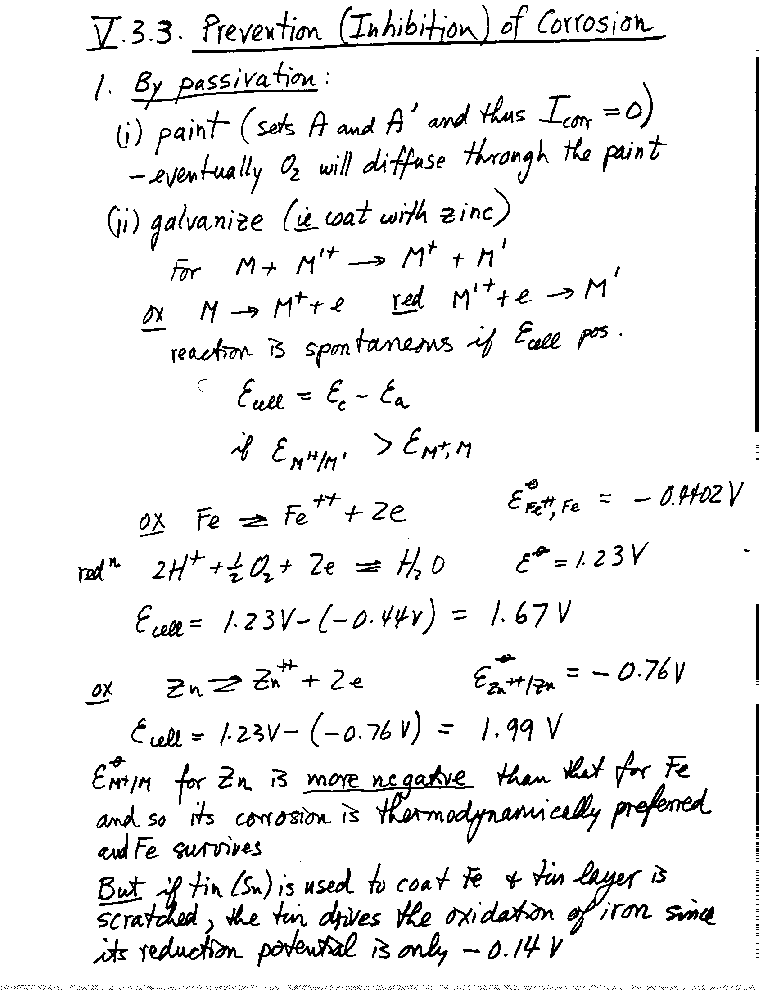
**CORROSION**

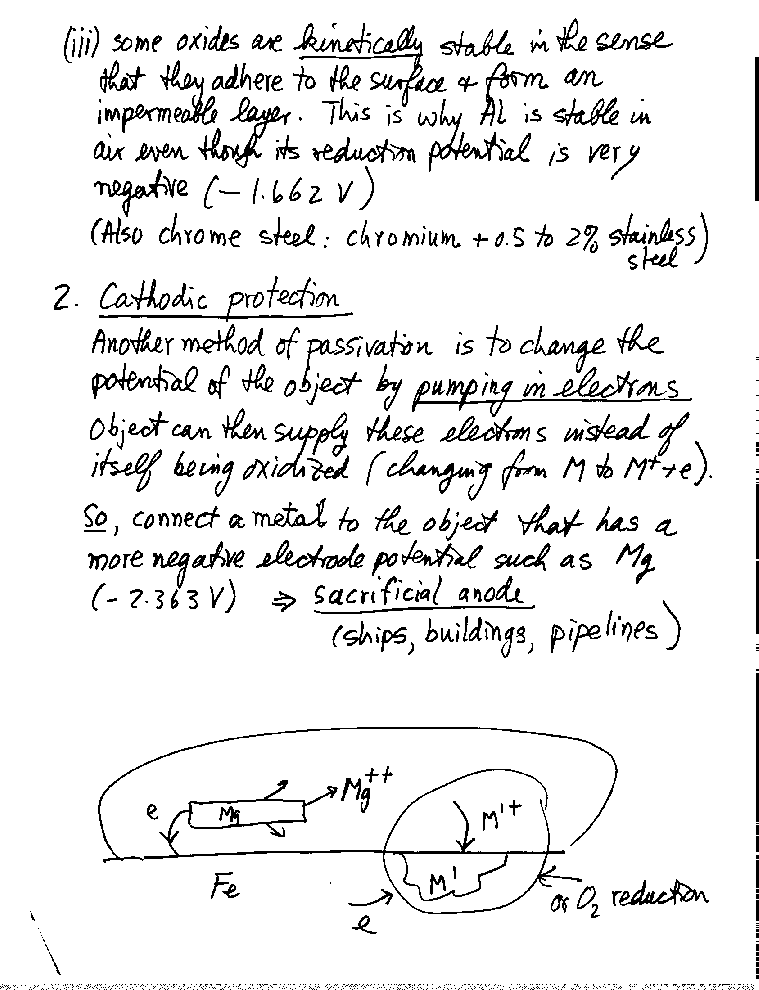
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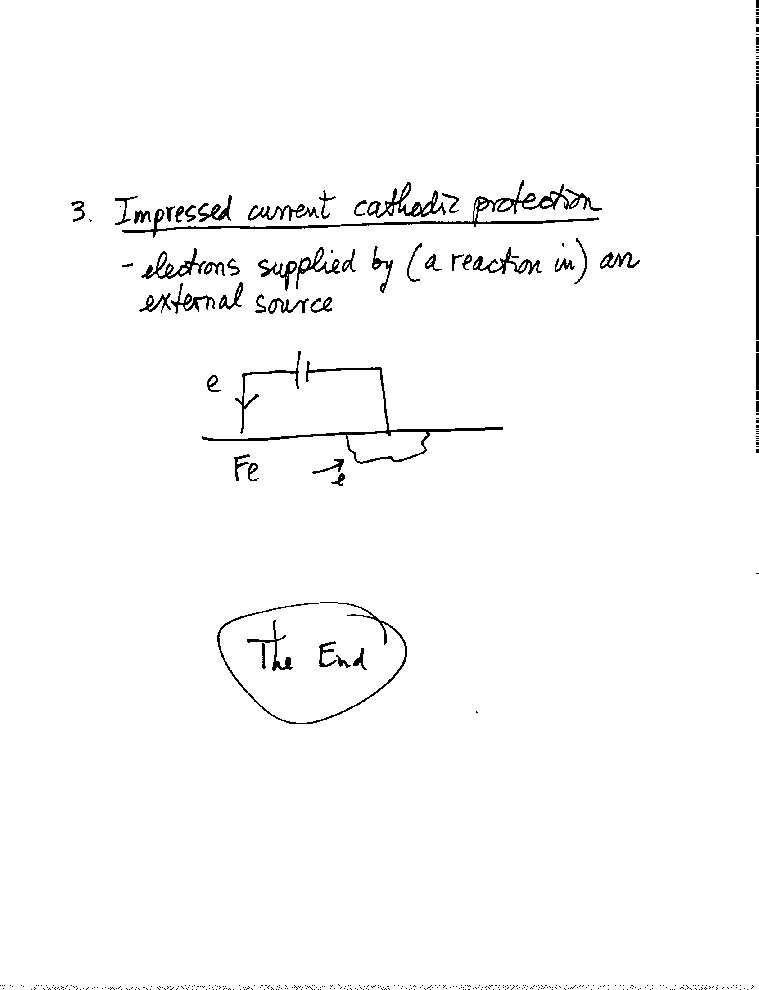
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