

**Physical Chemistry Laboratory II**

Chemistry 367

Section: D100

Term: 2004 Spring

Instructor: Dr. J-C. Brodovitch.

Office: C 9032

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Discussion Topics: General Course Description:

Continues CHEM 366-2.

0 lecture hours/week; 0 tutorial hour/week; 4 lab hours.

Topics:

Students are required to perform during the term six experiments chosen from the list given below (but not limited to that list); a written report corresponding to each experiment performed is to be submitted within two weeks of completion of the experiment.

Experiment

Topic

I Conductance of solutions: kinetics of Hydrolysis of Ethyl Acetate.

II Rotation-Vibration Spectrum of HCl and DCl.

III Dissociation Energy of Iodine.

IV Methanolysis of Acetal.

V Kinetics of Transfer of Na<sup>+</sup> through a NAFION Ion Exchange Membrane.

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VI Hydrolysis of Ethyl Vinyl Ether: the Kinetic Hydrogen Isotope Effect.

VII Cyclic Voltametry in non-aqueous media.

VIII Principle of Pulsed NMR.

IX The Enthalpy and Entropy of Excimer Formation.

Grading: 80% Lab Reports; 20% Performance in laboratory as judged by the instructor.

Required Texts: A Laboratory Manual will be provided at the first laboratory lecture.

Recommended Texts: Shoemaker, Garland, Steinfeld & Nibler, "Experiments in Physical Chemistry",

6th Ed. 1996 or 7th Ed. 2003. Publishers: McGraw Hill.

Materials/Supplies: None

Prerequisite/Corequisite: Prerequisite: CHEM 366.

Notes: None

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