

 <small>UC Davis</small>	<h2>Advanced Physical Chemistry</h2>	<p>Interdisciplinary Doctoral School 2nd semester Academic year 2021/2022</p>
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Schedule

Lectures are held on Tuesdays at 16:15 – 18:00.

L.p.	Date	Tutor	Topic	Remarks	
1.	8 March	Dr hab. inż. Adam Sikora	Advanced chemical kinetics. Rapid chemical kinetic techniques: stopped-flow, flash photolysis and pulse radiolysis technique. Kinetic simulations.		
2.	15 March		Basics of radiation chemistry. Matrix isolation. Radiolysis of water and aqueous solutions. Radiolysis of organic solvents and ionic liquids.		
3.	22 March	Prof. dr hab. Halina Abramczyk / Dr hab. inż. Beata Brożek-Płuska, prof. uczelni	Introduction to the advanced spectroscopic techniques used in chemistry, biology and medicine with the particular emphasis on problems solving to determine molecular structure. Advanced imaging techniques with the use of different types of spectroscopic techniques with particular emphasis on vibrational spectroscopy.		
4.	29 March				
5.	5 April				
6.	12 April			1 h	
7.	26 April	Prof. dr hab. inż. Dorota Świątła-Wójcik	Molecular simulation concepts and applications in solution chemistry.		
8.	10 May	Dr hab. inż. Sławomir Kadłubowski, prof. uczelni / Prof. dr hab. inż. Piotr Ułański	Light-scattering techniques for analysis of properties and dynamics of nanomaterials and polymers. Classical (static) Rayleigh light scattering and its analytical applications. Dynamic light scattering and related techniques.		
9.	17 May				
10.	24 May				
11.	31 May	Dr hab. inż. Marian Wolszczak, prof. uczelni	Physicochemical methods in the study of organized systems. The design and development of molecular probes.		
12.	7 June			Chemical aspects of photodynamic antitumor therapy and diagnostics.	
13.	14 June			Photoelectrochemistry. Solar to fuels conversions technologies. Thermodynamics of the conversion of solar radiation.	