

 <small>UC Davis</small>	<h2>Advanced Physical Chemistry</h2>	<p>Interdisciplinary Doctoral School 2<sup>nd</sup> semester Academic year 2024/2025</p>
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### Schedule

Lectures are held on Mondays at 16:15 at MITR (I34, building C2, Wróblewskiego 15, room 226).

No.	Date	Hours	Tutor	Topics
1.	17 March	16:15-18:00	Dr hab. inż. Adam Sikora, prof. uczelni	Advanced chemical kinetics. Rapid chemical kinetic techniques: stopped-flow, flash photolysis and pulse radiolysis technique. Kinetic simulations. Basics of radiation chemistry. Matrix isolation. Radiolysis of water and aqueous solutions. Radiolysis of organic solvents and ionic liquids.
2.	24 March	16:15-17:00		
3.	31 March	16:15-18:00	Dr hab. inż. Beata Brożek-Płuska, prof. uczelni / dr hab. inż. Jakub Surmacki	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.	7 April	16:15-18:00		
5.	14 April	16:15-18:00	Prof. dr hab. inż. Dorota Świątła-Wójcik	Molecular simulation concepts and applications in solution chemistry.
6.	28 April	16:15-18:00	Dr hab. inż. Sławomir Kałużowski, prof. uczelni / prof. dr hab. inż. Piotr Ulański	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.
7.	5 May	16:15-17:00		
8.	12 May	16:15-18:00	Dr hab. inż. Marian Wolszczak, prof. uczelni	Physicochemical methods in the study of organized systems. The design and development of molecular probes. Chemical aspects of photodynamic antitumor therapy and diagnostics. Photoelectrochemistry. Solar to fuels conversions technologies. Thermodynamics of the conversion of solar radiation.
9.	19 May	16:15-17:00		