

<b>Course number</b>	U-LAS70 10002 SE50				
<b>Course title (and course title in English)</b>	ILAS Seminar-E2 : Organic Electronics (材料化学が拓く次世代のエレクトロニクスの基礎) ILAS Seminar-E2 : Organic Electronics		<b>Instructor's name, job title, and department of affiliation</b>	Institute for Chemical Research Senior Lecturer,MURDEY , Richard James	
<b>Group</b>	Seminars in Liberal Arts and Sciences		<b>Number of credits</b>	2	<b>Number of weekly time blocks</b> 1
<b>Class style</b>	seminar (Face-to-face course)	<b>Year/semesters</b>	2024 ・ First semester		<b>Quota (Freshman)</b> 20 (10)
<b>Target year</b>	Mainly 1st year students	<b>Eligible students</b>	For all majors		<b>Days and periods</b> Tue.5
<b>Classroom</b>	21, Yoshida-South Campus Bldg. No. 1			<b>Language of instruction</b>	English
<b>Keyword</b>	chemistry / solid state physics / semiconductors / molecules / solar cells				
<b>[Overview and purpose of the course]</b>					
Organic molecules which conduct electricity are exciting materials for next generation display, lighting, and energy technologies. In this seminar, we will learn about molecular design, electrical conductivity, and the structure and operation of organic electronic devices like solar cells and transistors.					
<b>[Course objectives]</b>					
Students will gain a basic understanding of, and appreciation for, the field of organic electronics and its related technologies.					
<b>[Course schedule and contents)]</b>					
1. Introduction 2. Organic Electronics Today 3. Molecules and Materials 4. Hard Stuff: The Physics of Semiconductors 5. Why Organic Materials Are Fundamentally Different from Silicon 6. Doping and The Fermi Level 7. Purity and Purification 8. Fabrication Methods 9. More Hard Stuff: Device Measurements 10. Sensors and Imaging 11. Solar Cells 12. Light Emitting Diodes, Lighting, and Displays 13. Transistors 14. Would you like to know more? Open discussion. 15. [no class] 16. Feedback					
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Continue to ILAS Seminar-E2 : Organic Electronics (材料化学が拓く次世代のエレクトロニクスの基礎)(2)					

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**[Course requirements]**

None

**[Evaluation methods and policy]**

Homework assignments (100%).

**[Textbooks]**

No textbook

**[References, etc.]**

( **References, etc.** )

Additional resources will be provided in class.

**[Study outside of class (preparation and review)]**

Students must research and prepare short reports on selected topics.

**[Other information (office hours, etc.)]**

Wednesdays 16:00-18:00.