

上海交通大学研究生课程开设申请表

New Graduate Course Application Form, SJTU

Basic Information																			
* Course Name	Chinese English Photovoltaic Materials and Devices																		
* Credits	2	* Teaching Hours	32 1 16																
* Semester	Spring	* Cross-semester?	No	Spanning over Semesters															
* Course Category	Specialized Course	* Course Type	For full-time students																
* Instruction Language	Chinese	Teaching Method	In class teaching																
* Grade	Letter grading	Exam Method	Tests																
* School																			
Subject																			
Person in charge	Name	ID	School	E-mail															
				han.liyuan@sjtu.edu.cn															
Extended Information																			
* () Course Description	1	3	200	2															
* English Course Description	<p>The course is set for the postgraduate students of the department of materials science and engineering. It covers the main content of photovoltaic materials and devices, such as the history of the photovoltaic field, the working principles for the devices, the development of the new-generation perovskite solar cell and the challenges in commercialization. Under the background of upgrading energy mix and the thriving of photovoltaic industry, this course aims at imparting systematic knowledge of photovoltaic materials and devices to our students, helping them learn about the history and the current status of solar cell, the fundamental theory, fabrication, measurement and analysis of the devices, and the cutting edge of photovoltaic field. In addition, this course includes practice in laboratory so that the students can apply their knowledge into the design and analysis of solar cells. The course is suitable for students after the courses of Fundamental of materials science, college physics, materials chemistry and so on.</p>																		
* () Syllabus	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 50%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										2					2			
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	Students observe the fabrication process of perovskite solar cells in the laboratory, fabricate perovskite thin films in groups, and test the photoelectric properties of thin films and devices	2	Practice	Yanbo Wang
	Students select a kind of optoelectronic materials and devices they are interested in for data summary and presentation	2	Discussion and Presentation	Yanbo Wang
	50			
* Requirements	1. 20% 2. 30% 3. PPT 30% 4. 20%			
* English Requirements	1.Homework 20% 2.Literature Report 30% 3.Powerpoint for a self-chosen topic 30% 4.Oral Report 20%			
Resources	1. [M]. 2013. 2.Jenny Nelson. [M]. 2018. 3. [M]. 2008. 4. [M]. 2020. 5. [M]. 2020.			
English Resources	1. [M]. 2013. 2.Jenny Nelson. [M]. 2018. 3. [M]. 2008. 4. [M]. 2020. 5. [M]. 2020.			
Note				