

Energy Conversion by Semiconductor Devices

Jun-Ho YUM

junho.yum@epfl.ch

- 1. The solar energy**
- 2. Light-Matter interaction**
- 3. The basic of semiconductors and junctions**
- 4. The basic of solar energy conversion and solar cells**
- 5. Solar cell technologies, pn junction solar cell, third generation solar cells**
- 6. The basic in electrochemistry in water splitting**
- 7. Green water splitting by photoelectrochemistry**
- 8. Green water splitting by photocatalysis**

Total 5 – 7 questions!

- 1. Physical and chemical concepts and meanings: Photovoltaic effect, E_F , SC properties, Junction, E_{fb} , Standard potential, Reference electrode potential, Nernst equation, S-Q limit, etc**
- 2. Light-Matter interaction: Excitation, Dissipation, Exciton, Recombination, Absorption, Emission, Quasi-Fermi Levels, etc**
- 3. Metrics: I-V, EQE, IQE, Recombination, E_{fb} , PEC characterization, PC characterization, etc**
- 4. Operational mechanisms: Solar Cells, PEC, PC, Loss mechanism, etc**
- 5. Materials or device requirements for applications**
- 6. Equations: Photon energy eV to nm, EQE to IQE, mass action (carrier concentration)**

Name	First name	Sciper	T1	T2	T3
Bergonzi	Clara	389535	10:00	10:20	10:40
Bouchez	Arthur	272024	10:25	10:45	11:05
Diercks	Nicolas	348691	10:50	11:10	11:30
Folter-De Cian	Louise	330238	11:15	11:35	11:55
Guillosso	Coline	303130	13:30	13:50	14:10
Kakavas	Nikolaos	325754	13:55	14:15	14:35
Tang Vidale	Marc	395181	14:20	14:40	15:00
Tracol	Axel	389495	14:45	15:05	15:25
			T1: arrival time		
			T2: time to enter the room, CH B2 355		
			T3: exam is over		

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- Log onto moodle and stay on the **moodle home page (dashboard, not the course page)**.
- Click on the arrow to the top right of the screen which will reveal a block that contains the entitled “In-depth evaluation” tile (please note: all evaluations will be together in the evaluation tile on the moodle home page, and not separate in each course moodle page).
- Students can then select your course and complete the feedback.