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| 课程名称（中英文） | 太阳能的利用 / Solar Energy Utilisation | | | |
| 课程负责人 | 姓名 | Tang Junwang | 职称 | Chair Professor |
| 课程号 | 80340602 | | 课序号 | 0 |
| 课程先修条件  （中英文） | 最好有物理化学，无机化学或者半导体物理的基础知识。  Prefer to have knowledge of Physical Chemistry, Inorganic Chemistry and Semiconductor Physics | | | |
| 课程学时 | 课内学时\_\_\_\_\_32\_\_\_  教师课外投入时间\_\_\_8\_\_\_\_\_  学生课外投入时间\_\_\_\_96\_\_ | | | |
| 课程大纲及  考核方式 | 请提供2023秋季学期英文版大纲，如尚未定稿可提供2022秋季学期大纲。可另附附件提交。  Section 1 Background of Solar Energy   * 1. Solar energy and photophysics   2. Energy quantization and atomic structure   3. Photovoltaics   1.4 Photocatalysis  Section 2 Utilisation of Solar Energy  2.1 Natural photosynthesis and photochemistry  2.2 Photocatalytic environmental purification  2.3 Solar energy to electricity and heating  2.4 Water splitting to green H2  2.5 Photocatalytic NH3 synthesis  2.6 CO2 to valuable chemicals  2.7 Photocatalytic methane conversion  2.8 Charge dynamics  2.9 Perspectives of solar energy utilization  Section 3 Experiments on water purification  Section 4 Application of solar energy  4.1 Solar energy and nanomaterials  4.2 Scenario on NH2 synthesis | | | |