

Biography

Name: Takashi Hisatomi
Associate Professor
Center for Energy & Environmental Science
Interdisciplinary Cluster for Cutting Edge Research
Shinshu University



Research interests:

- Semiconductor photocatalysts and photoelectrodes for overall water splitting
- Kinetics and reaction selectivity of photoexcited carriers in semiconductors
- Reaction systems and processes for renewable solar fuel production

Academic Background:

- Mar 2005 Bachelor's degree in Engineering from The University of Tokyo, Japan
(Department of Chemical System Engineering)
- Mar 2007 Master's degree in Engineering from The University of Tokyo, Japan
(Department of Chemical System Engineering)
- Mar 2010 Doctor's degree in Engineering from The University of Tokyo, Japan
(Department of Chemical System Engineering)

Professional Career:

- Apr 2010 – Postdoctoral Fellow of Laboratory of Photonics and Interfaces, École Polytechnique
Mar 2012 Fédérale de Lausanne, Switzerland
- Apr 2012 – Postdoctoral Fellow of Department of Chemical System Engineering, School of
Aug 2012 Engineering, The University of Tokyo, Japan
- Aug 2012 – Assistant Professor of Department of Chemical System Engineering, School of
Mar 2018 Engineering, The University of Tokyo, Japan
- Apr 2018 – Associate Professor of Center for Energy & Environmental Science, Interdisciplinary
present Cluster for Cutting Edge Research, Shinshu University, Japan

Representative Review Articles:

1. **Takashi Hisatomi**, Tsutomu Minegishi, Kazunari Domen. Kinetic Assessment and Numerical Modeling of Photocatalytic Water Splitting toward Efficient Solar Hydrogen Production. *Bulletin of the Chemical Society of Japan* **2012**, *85*, 647–655. DOI: 10.1246/bcsj.20120058
2. **Takashi Hisatomi**, Jun Kubota, Kazunari Domen. Recent advances in semiconductors for photocatalytic and photoelectrochemical water splitting. *Chemical Society Reviews* **2014**, *43*, 7520–7535. DOI: 10.1039/C3CS60378D.
3. **Takashi Hisatomi**, Kazuhiro Takanabe, Kazunari Domen. Photocatalytic Water-Splitting Reaction from Catalytic and Kinetic Perspectives. *Catalysis Letters* **2015**, *145*, 95-108. DOI: 10.1007/s10562.
4. David M. Fabian, Shu Hu, Nirala Singh, Frances A. Houle, **Takashi Hisatomi**, Kazunari Domen, Frank Osterloh, Shane Ardo. Particle Suspension Reactors and Materials for Solar-Driven Water Splitting. *Energy & Environmental Science* **2015**, *8*, 2825–2850. DOI: 10.1039/C5EE01434D.
5. **Takashi Hisatomi**, Kazunari Domen. Introductory lecture: Sunlight-driven water splitting and carbon dioxide reduction by heterogeneous semiconductor systems as key processes of artificial photosynthesis. *Faraday Discussions* **2017**, *198*, 11–35. DOI: 10.1039/c6fd00221h.
6. **Takashi Hisatomi**, Kazunari Domen. Progress in the demonstration and understanding of water splitting using particulate photocatalysts. *Current Opinion in Electrochemistry* **2017**, *2*, 148-154. DOI: 10.1016/j.coelec.2017.04.005.