News Release

New Energy and Industrial Technology Development Organization（NEDO）
Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPChem)

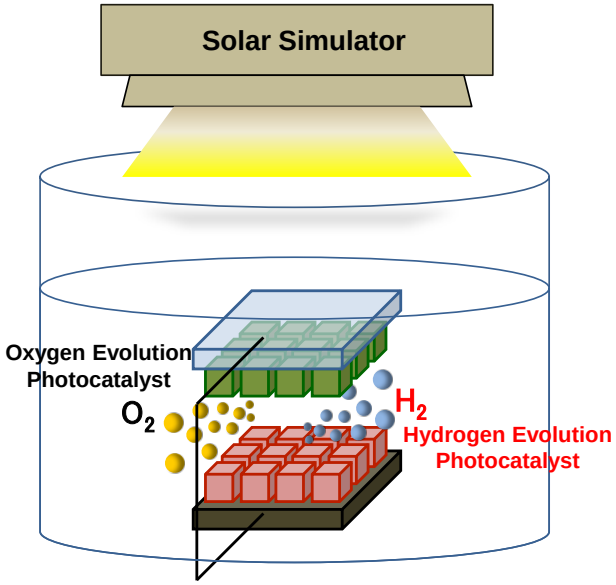
2015.3.31

State-of-the-art solar hydrogen production at 2% energy conversion efficiency

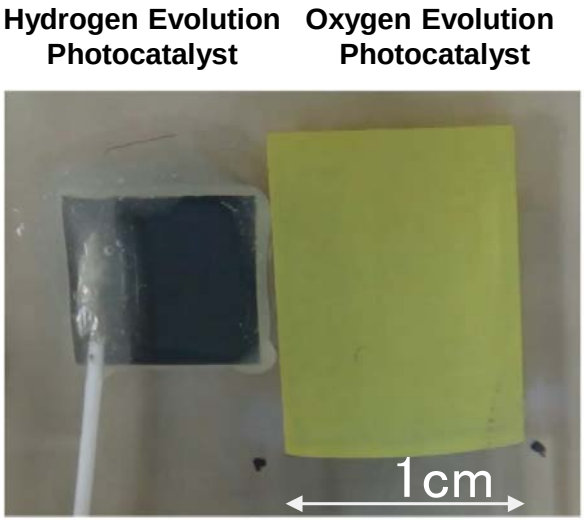
－Toward innovation in base manufacturing technology for production of basic chemicals without the need of fossil fuels－

NEDO and Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPChem) achieved a world-leading solar energy conversion efficiency of 2% in the photocatalytic solar hydrogen production from water, a kind of artificial photosynthesis reaction.

We are targeting 10% solar energy conversion efficiency by the end of fiscal year 2021. The achievement will be combined with membrane separation and synthetic catalyst technologies developed in parallel to establish an innovative base technology for production of basic chemicals.



A schematic of unassisted photocatalytic water splitting.



A picture of developed photocatalysts.

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