NovaUCD

Technology Licensing Opportunity

Large Scale Hydrogen Generation Using Unpurified Water

- Does not require the use of rare and expensive earth metal catalysts

Opportunity:

Researchers at University College Dublin have developed a new photochemical process for producing hydrogen from unpurified water (e.g. sea water or wastewater) by combining solar radiation with an external field to perform water splitting and obtain Hydrogen gas in an economical manner.

Applications:

The application of this technology is the novel use of electric fields at the semiconductor-water interfaces to boost the efficiency and performance of photoelectrochemical water splitting, increasing the generation of Hydrogen.

Key Features/Advantages:

- Ability to generate Hydrogen from water splitting by combining a photoelectrochemical cell with an external electromagnetic field.
- The properties of the electromagnetic field are selected to increase susceptibility of water molecules to break-up, dramatically increasing the generation of Hydrogen gas.
- Technology does not require the use of rare (or expensive) earth metal catalysts.
- Can use salt or wastewater rather than highly purified water.

FUNDERS: Science Foundation Ireland sfi For what's next

Value Proposition:
Large scale hydrogen generation from unpurified water (e.g. wastewater or salt water), using low cost materials and methods.

Market:
Hydrogen Generators, energy suppliers and Hydrogen market.

Lead Inventor:
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IP Status/Publication:
Patented Technology.

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