

**Information on Search Strategy - Pilot phase (see OJ 2015, A86)**

The type of information contained in this sheet may change during the pilot for improving the usefulness of this new service.

Application Number

PCT/IB2018/051126

TITLE: PHOTOCATALYST FOR EFFICIENT HYDROGEN GENERATION

APPLICANT: SABIC GLOBAL TECHNOLOGIES B.V.

IPC CLASSIFICATION: B01J37/03, B01J23/42, B01J27/04, B01J35/00, C01B3/04, C25B1/00

EXAMINER: Zieba, Roman

CONSULTED DATABASES: EPODOC, WPI, NPL

CLASSIFICATION SYMBOLS DEFINING EXTENT OF THE SEARCH:

IPC:

CPC: B01J37/031, B01J23/42, B01J27/04, B01J35/0013, B01J35/004, C01B3/042, C25B1/003

FI/F-TERMS:

KEYWORDS OR OTHER ELEMENTS FEATURING THE INVENTION:

A water splitting photoelectrochemical (PEC) catalyst comprising metal (MI) nanostructures positioned between a  $Cdx Zn_{1-x}S$  semiconductor and a ZnO semiconductor to form a Z-scheme catalyst having the structure  $ZnO/M/CdxZn_{1-x}S$ , where x is less than 1. The photocatalytic reactor and method of producing hydrogen using the catalyst.