

PROJECT TITLE: Hydrogen energy by solar activation of cellulose**PROJECT ACRONYM: HESAC****ABSTRACT**

Forests store vast amounts of carbon and energy and wood has classically been our major source of energy until it was usurped by coal in 1850. Over 2 billion people across the world still use wood for heat and cooking. With the onset of digital age, there has been a drop in demand for newsprint, resulting in rethinking of economics of paper making and energy policy towards the use of the renewable bioenergy. Combined to this, the urge for lowering greenhouse gas emissions and protection of our environment needs renewed thinking for the production of bio-energy. This consortium of higher education institution (KTH Royal Institute of Technology in Sweden) an SME's from Poland (Ekolog Sp. z o.o.) and another SME from Germany (Zoz GmbH working as an associate partner) propose to utilise sunlight to transform cellulosic materials to produce useful hydrogen energy which can be used in remote and transportation applications as well as in the cogeneration of energy. The proposed breakthrough technology has a potential to revolutionise the utilisation of non-food forest resources for energy production.

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