Acronimo - BEAGLE

Titolo del progetto - A bio-inspired chemical approach for agro-industrial waste valorization

Programma di Finanziamento Piano Nazionale di Ripresa e Resilienza

Missione 4 - Componente 2 - Investimento 1.1: Progetti di Ricerca di Rilevante Interesse Nazionale (PRIN) – Avviso 1409 del 14/09/2022

Codice Progetto - P20223HSWX

Settore ERC PE - Physical Sciences and Engineering

CUP - H53D23007850001

Ruolo Uniba - R.U.L.

Responsabile scientifico - Andrea Listorti

Referente amministrativo - Guido De Santis

Dipartimento - Chimica

Finalità - Generare solar fuels

Abstract

The BEAGLE project aims at affording a wise use and re-use of biomass wastes through sunlight driven catalysis. In particular, the catalysts themselves will be biomass-derived; making use of wastes such as rice hulls to make carbon quantum dots (CQDs). The CQDs will be combined with light absorbing materials to produce composite photocatalysts that will be applied in degrading biomass wastes to produce clean hydrogen fuel from water and for the preparation of membranes for water purification. The project will see the strong collaboration among three Research Units belonging each characterized by specific and complementary expertise providing a straightforward focus on experimental and modelling tasks.

Risultati attesi

(i) impacts on circular economy and environmental sustainability (development of added value products, use of wastes and water quality improvement);

(ii) impacts in terms of long and medium product and process innovation (exploration of new and very high added value applications of biomasses);

(iii) expected impacts with regard to climate-neutral society through the effective and green production of a key energy vector (hydrogen);

(iv) expected impact in terms of external communication and potential engagement of civil society; and

(v) expected impacts in terms of knowledge advancement (most of the expected outcomes of this project represents novel materials/applications/processing).

Partenariato - Università di Pavia coordinatore; CNR-SCITEC di Perugia UL

Evidenze pubbliche

- https://www.uniba.it/it/ricerca/dipartimenti/chimica/dipartimento/amministrazione-trasparente
- https://reclutamento.ict.uniba.it/assegni-di-ricerca/concorsi/2023-pr-03.213

Contributo MUR - 225.000,00 Euro

Budget Uniba - 71.250,00 Euro

Data avvio delle attività - 30.11.2023

Data fine delle attività - 29.11.2025

Pagina web progetto

https://www.uniba.it/it/ricerca/dipartimenti/chimica/ricerca/progetti-finanziati/bandi-prin-2022-pnrr/