



DEEP PURPLE

CONVERSION OF DILUTED MIXED URBAN BIO-WASTES
INTO SUSTAINABLE MATERIALS AND PRODUCTS IN
FLEXIBLE PURPLE PHOTOBIOREFINERIES

JOB OFFER



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Bio-based Industries
Consortium



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WORK DESCRIPTION

Hosting researchers DANIEL PUYOL SANTOS RAÚL MOLINA GIL JUAN ANTONIO MELERO HERNÁNDEZ FERNANDO MARTÍNEZ CASTILLEJO	Research group CHEMICAL AND ENVIRONMENTAL ENGINEERING
Department CHEMICAL AND ENVIRONMENTAL TECHNOLOGY	
Keywords PURPLE PHOTOTROPHIC BACTERIA, BIOECONOMY, BIOREFINERY, PHA, FERTILIZERS, METABOLISM, PILOT PLANT OPERATION, BIOMASS DOWNSTREAM	
<p>Summary:</p> <p>The University Rey Juan Carlos offers a Research Assistant job for working under the frame of the European Project DEEP PURPLE (GA No.: 837998). The job has the following RESPONSIBILITIES:</p> <ul style="list-style-type: none"> - To operate and maintain a pilot-scale bio-refinery consisting on: <ol style="list-style-type: none"> 1. A pair of 0.5 m³ photo-bioreactors, where purple phototrophic bacteria will evolve 2. Pumping units for inlet, outlet and recirculation of the plant 3. A pair of settling units 4. A microwave volumetric heating unit for biomass pasteurization 5. A decanter for biomass dewatering 6. A sludge infrared drier - To analyse all the macroscopic parameters for the operation of the pilot-plant, including: COD, VSS/TSS, N and P forms, among others - To perform specific analysis on the metabolism of purple phototrophic bacteria, including batch and short-term continuous tests at laboratory scale - To write scientific documents and preliminary reports <p>Offer:</p> <ul style="list-style-type: none"> - A one-year contract that may be extended based on milestones evaluation. - Competitive salary. - The job position will have a first milestone at August 2020, where it will be checked whether a PhD position is offered to continue with the work for up to 3 years. - Working in a high-level scientific-technical environment, with an emerging technology where the URJC is a pioneer in the EU. <p>Requirements:</p> <ul style="list-style-type: none"> - MS on chemical engineering, environmental engineering, environmental biotechnology, wastewater treatment or similar - Experience on pilot-plan operation - Experience on biological wastewater treatment - Availability to travel locally (surroundings of Madrid) - To be in good fit to operate large and heavy equipment - Proficiency in English - Immediate incorporation. <p>Valuable:</p> <ul style="list-style-type: none"> - Experience on modelling/simulation of biological processes - Experience on massive sequencing analysis (metagenomics, metaproteomics) - Valuable Spanish language. - Open mind - Proactivity - Team worker - Problem-solving attitude 	

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