## GREENET



W4RES – GREENET Brokerage Event



26th September 202







www.w4res.eu





welcome@w4res.eu

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# SOCAR Turkey R&D and Innovation Inc.





R&D Centre established on 1200 m² area including Laboratories







Pilot Plant Offices Laboratories

- Rheology Laboratory
- Catalyst Laboratory
  - Polymer Characterization Laboratory
  - Environment&Biotechnology Laboratory
  - Chemical Analysis Laboratory
  - Chromatography Laboratory



#### **EU PROJECTS**

#### CARMOF (H2020)

TAILORMADE 3D PRINTED STRUCTURES BASED ON CNT AND MOF MATERIALS FOR EFFICIENT CO2 CAPTURE

#### CO2FOKUS (H2020)

CO2 UTILISATION FOCUSED ON MARKET RELEVANT DIMETHYL ETHER PRODUCTION, VIA 3D PRINTED REACTOR- AND SOLID OXIDE CELL BASED TECHNOLOGIES

#### NEFERTITI (H2020)

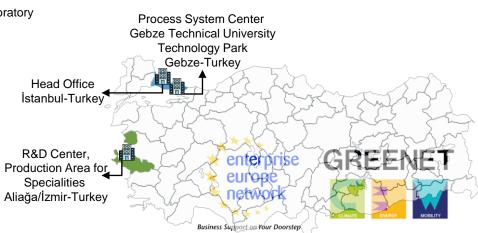
INNOVATIVE PHOTOCATALYSTS INTEGRATED IN FLOW PHOTOREACTOR SYSTEMS FOR DIRECT CO2 AND H2O CONVERSION INTO SOLAR FUELS

#### LOUISE (H2020)

LOW-COST CO2 CAPTURE BY CHEMICAL LOOPING COMBUSTION OF WASTE-DERIVED FUELS

#### Circular TwAIN (HEUROPE)

AI PLATFORM FOR INTEGRATED SUSTAINABLE AND CIRCULAR MANUFACTURING



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10
TECH-3
BSC-5
MSC STD-3
MSC-7
PHD STD-2
PHD-10

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## RenXalg

## HORIZON-CL5-2022-D3-03-07: Development of algal and renewable fuels of non-biological origin

- RenXalg
- Novel heterogeneous structured catalyst and unique process development for the synthesis of high-quality biofuels (renewable diesel, SAF etc.) from algal and vegetable lipids
- SOCAR R&D might design, synthesize, characterize and test metal oxide catalysts for the synthesis of biofuels from algal and vegetable lipids
- SOCAR R&D might develop conceptual design of proposed process
- Academy-Industry Collaboration: SOCAR R&D and Innovation Co. and IZTECH
- Partners sought for; Algae producer, Scale-up, Engineering, catalyst manufacturer and LCA

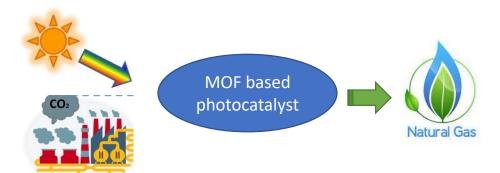






### HORIZON-CL5-2022-D3-03-03: Efficient and circular artificial photosynthesis

- PHOTONG (PHOTOcatalytic Natural Gas)
- Development of efficient MOF based photocatalyst for the production of sustainable natural gas (CH4) from captured CO2 via artificial photosynthesis
- SOCAR R&D might take role in;
  - the design and development of photocatalysts.
  - The investigation of the reaction conditions and requirements to design the appropriate catalysts
  - the detailed characterizations of the catalysts with the aim of determination of textural, chemical and morphological specifics of the catalysts.
  - the pilot tests of the developed catalysts to obtain kinetic data and catalytic activity results together with the parametric test for the determination of optimum operation conditions
  - the exploitation and dissemination tasks of the project with the help of the industrial data
- SOCAR R&D and IZTECH
- Partners sought for; Scale-up, Engineering, Catalyst Manufacturer and LCA







PHOTONG