

# WEBINAR

SOLUCIONS INNOVADORES PER AL SECTOR DE LA  
BIOENERGIA

*CO-ELECTROLISIS D'ALTA TEMPERATURA PER RUTES  
POWER TO FUEL O POWER TO GAS (TO POWER)*

*Marc Torrell Faro, Investigador Senior*



# Nanoionica i Piles de Combustible: IREC

25+ M€  
in projects  
since 2010



11

RESEARCHERS



1

RESEARCH FACILITIES  
MANAGER



7

POSTDOCS



16

PHD STUDENTS



140

PUBLICATIONS



19

THESIS



7

PATENTS



60

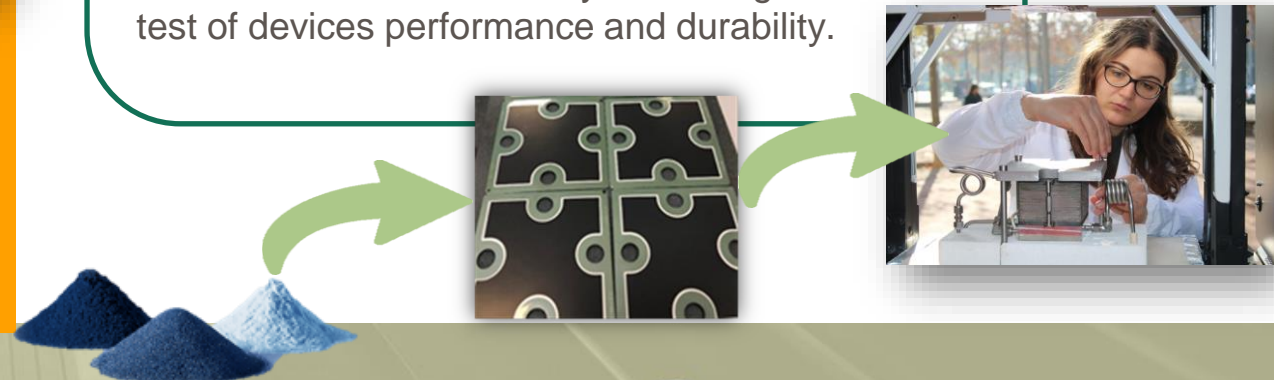
INVITED TALKS

## Short description of the activities



The group is focused on the use of **hydrogen for clean power generation** (fuel cells) and the **storage of electricity in the form of renewable gases** (H<sub>2</sub> production by steam electrolysis).

The team is developing new technology of highly efficient **solid oxide fuel and electrolysis cells** to build up stacks and integrate them into systems. With almost two decades of experience in this field, our team covers from the implementation of new materials and novel fabrication processes for the stack fabrication and system integration to the test of devices performance and durability.

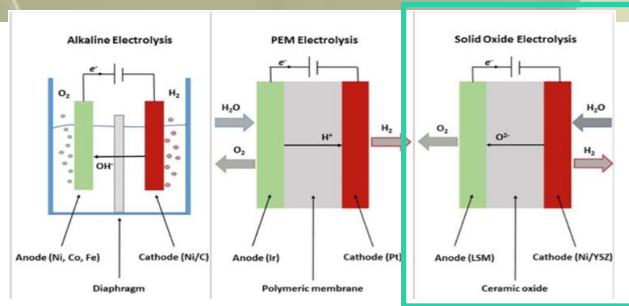
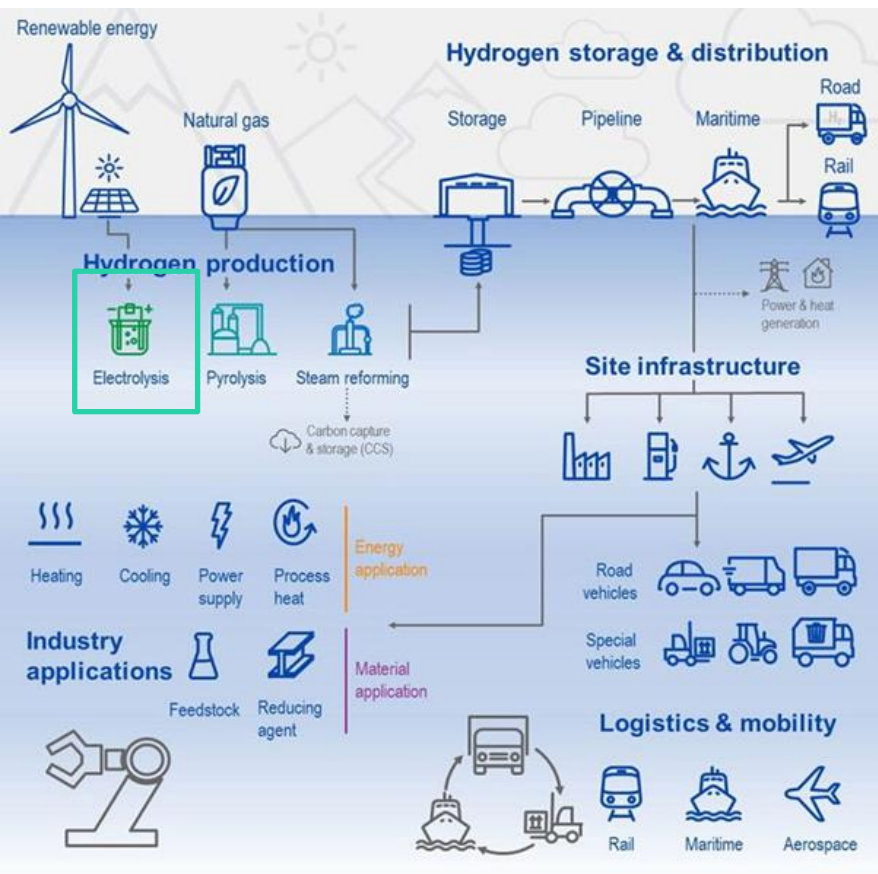


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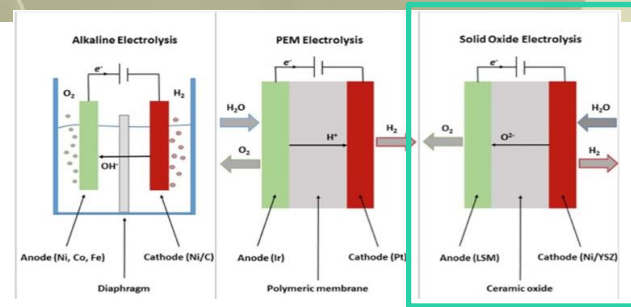
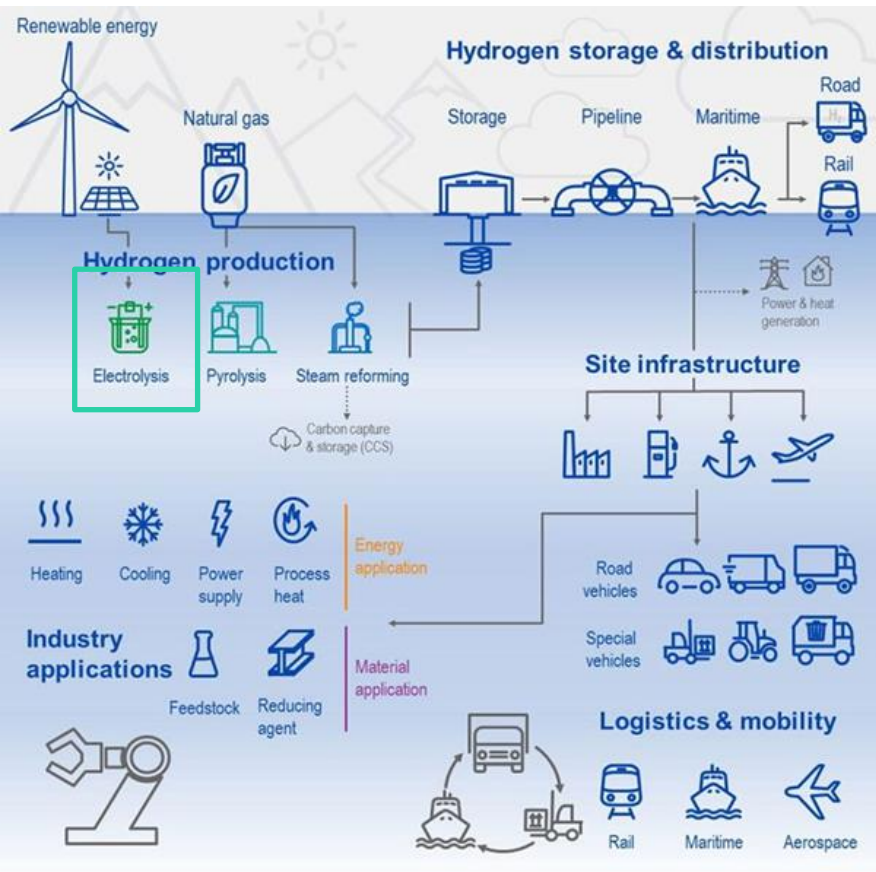


PLAANUAL  
DE TRANSFERÈNCIA TECNOLÒGICA

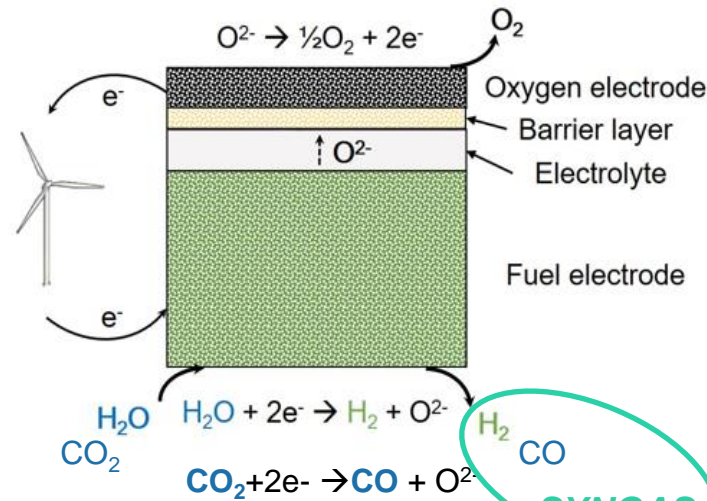
# Co-electròlisi com a tecnologia Power-to-Gas or Power to Liquid (P2x)



# Co-electròlisi com a tecnologia Power-to-Gas or Power to Liquid (P2x)



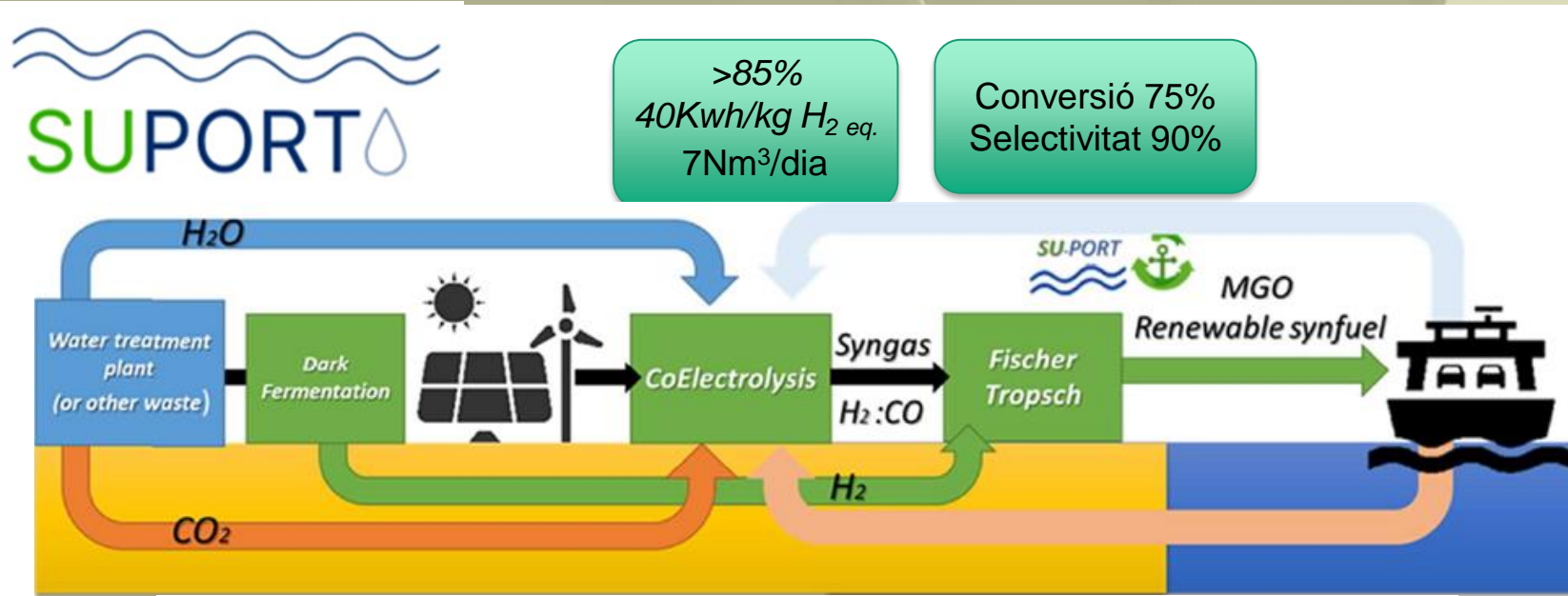
Solid Oxide Electrolysis Cell



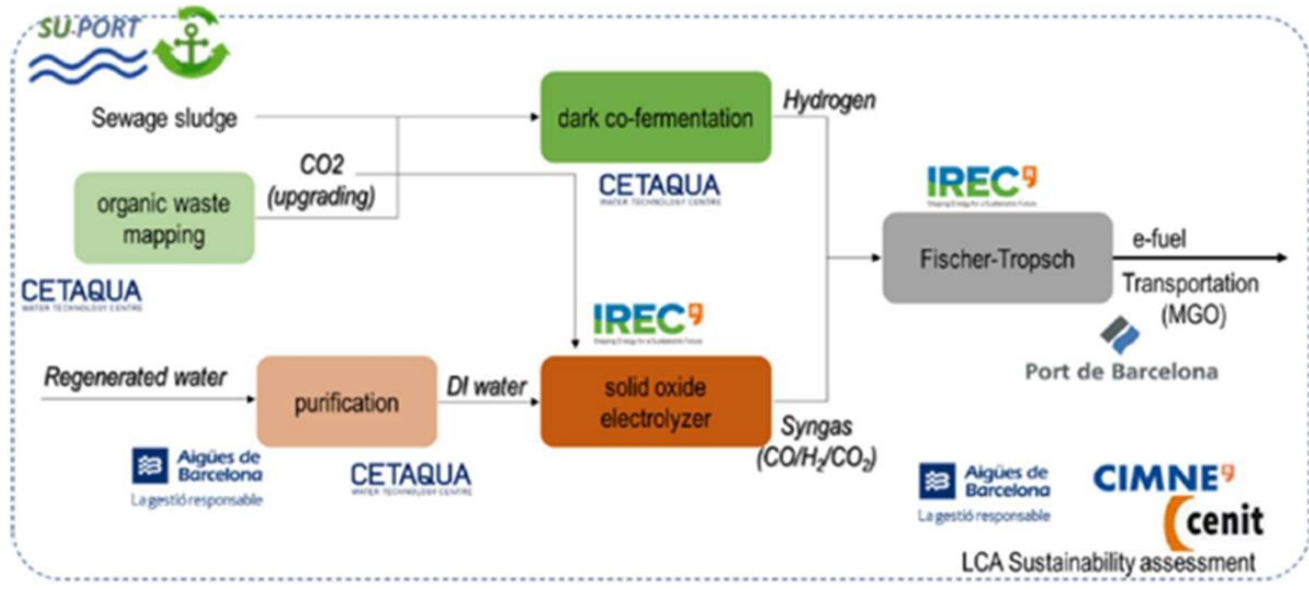
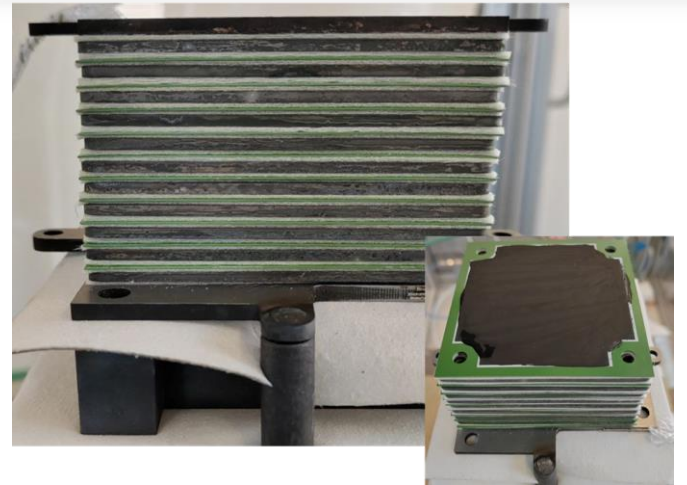
Precursor de combustibles sintètics (Metà, Metanol, Diesel, Etc...)



# Co-electròlisi com a tecnologia Power to Liquid (P2x)



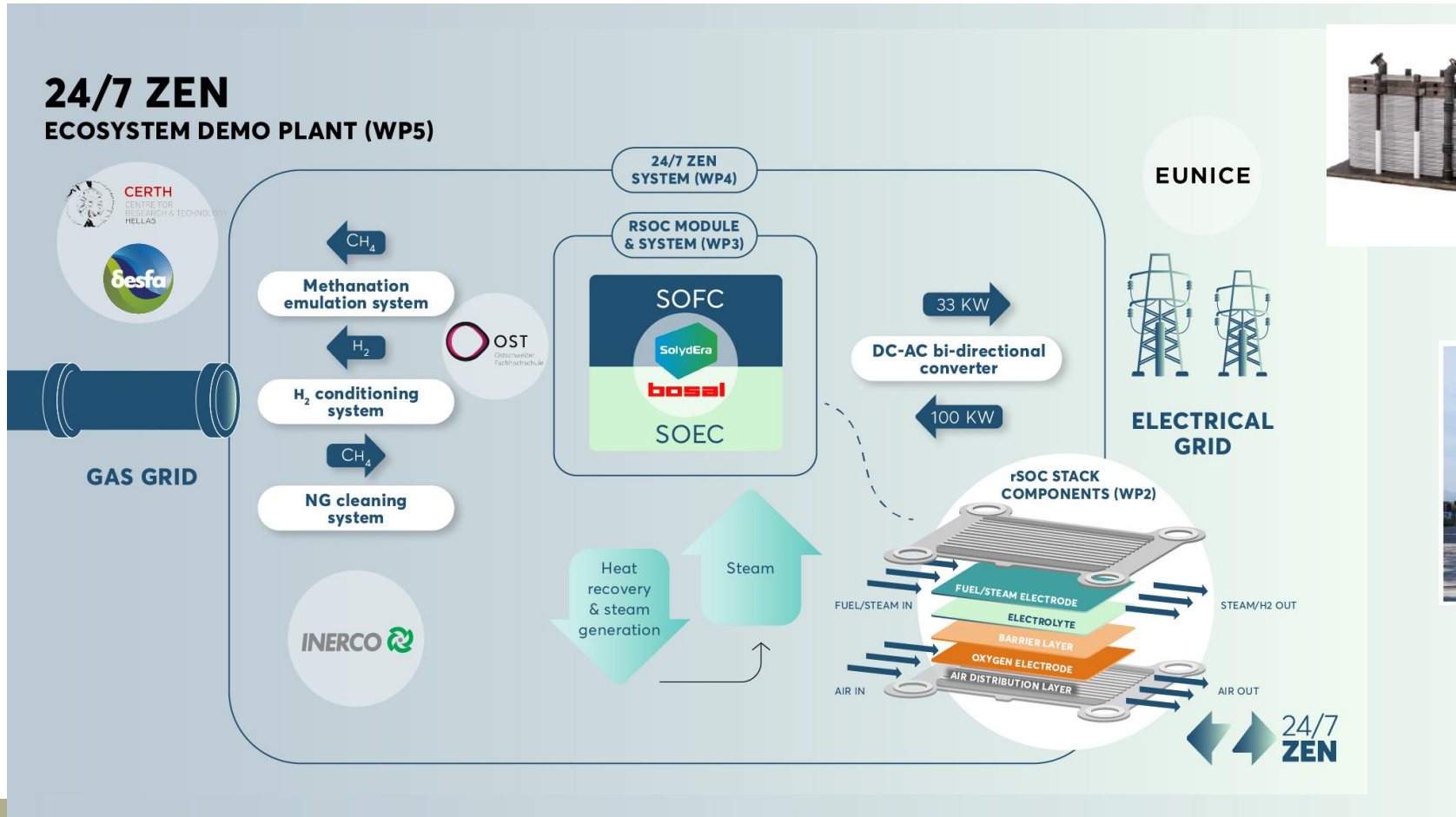
a)



# Co-electròlisi com a tecnologia Power-to-Gas-to-Power



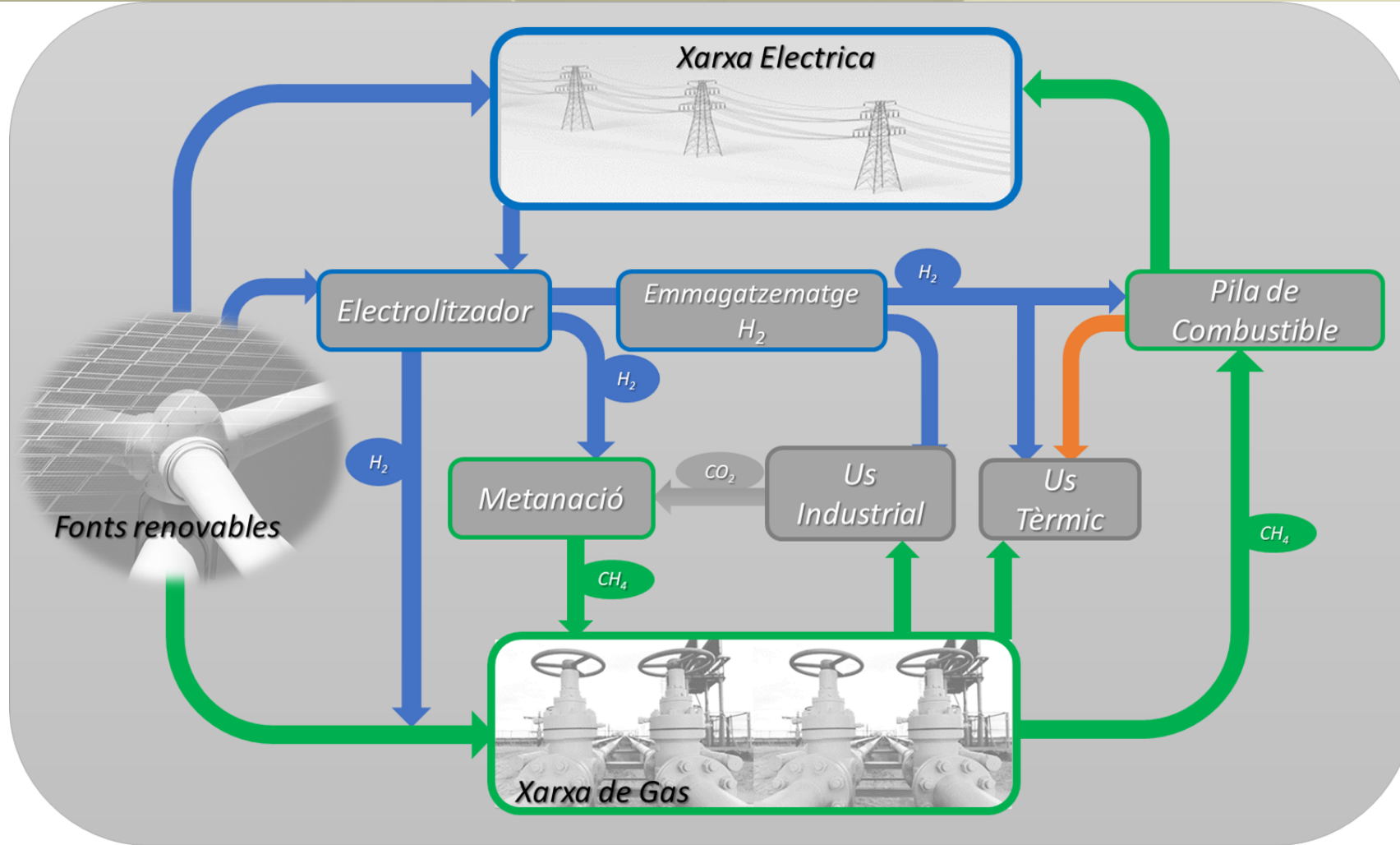
## Tecnologia SOC reversible com a balanç de xarxa elèctrica/gas



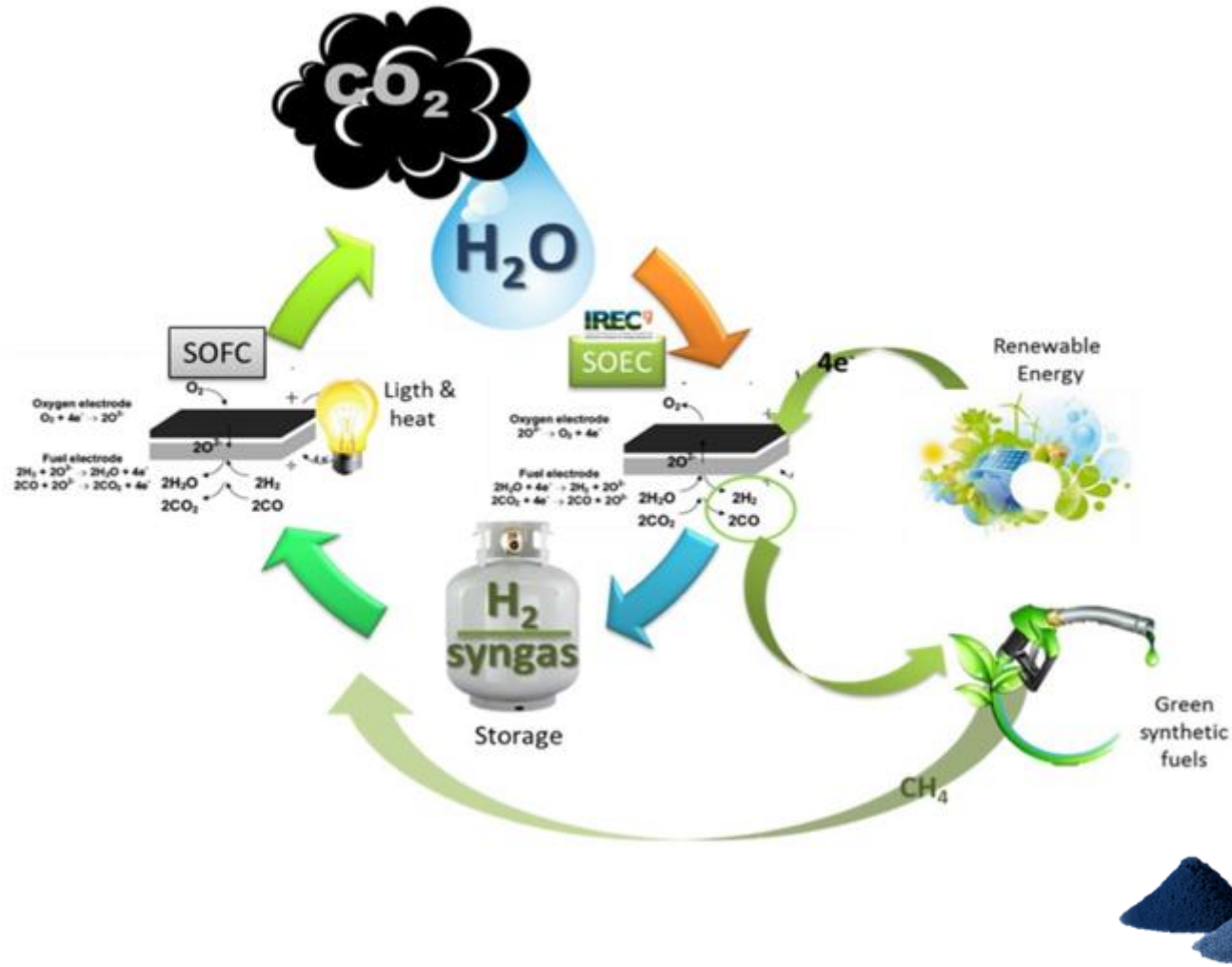
33kW/100kW



# Co-electròlisi com a tecnologia Power-to-Gas

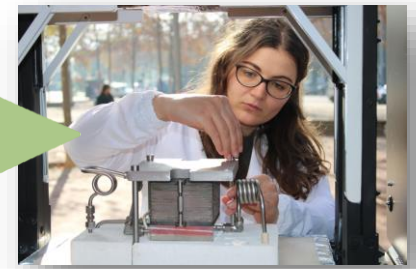
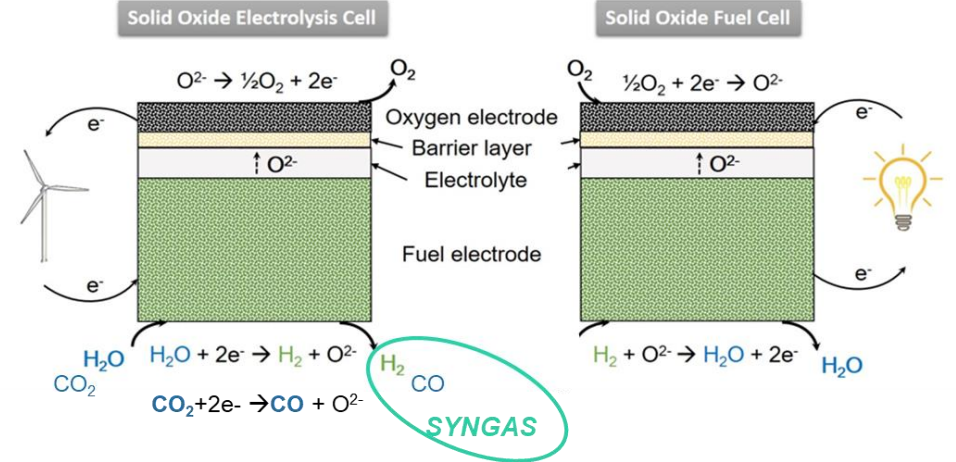


# Col·laboracions Potencials



SOEC  
(Chemical Energy Storage)

SOFC  
(Power Generation)





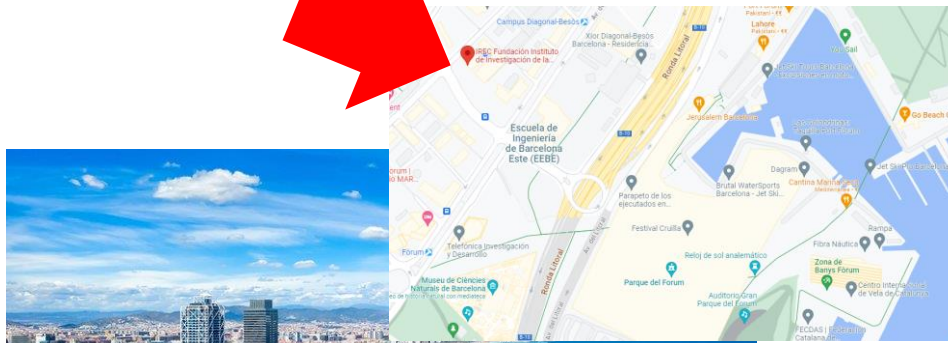
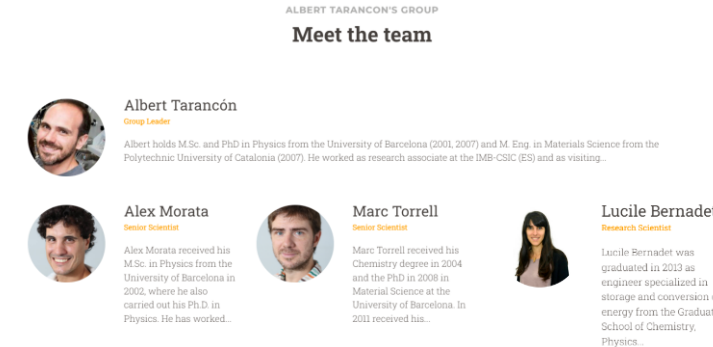
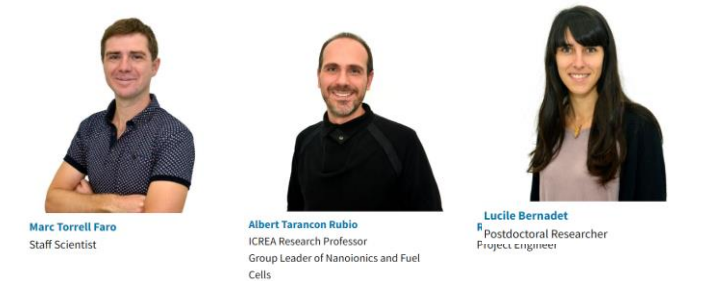


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