

Enjoy reading the NANOMEMC² newsletter!

The NANOMEMC² project is a research and innovation action of Horizon 2020 funded under the topic LCE-24-2016 "International cooperation with South Korea on new generation high-efficiency capture processes".

It aims at reducing the cost, energy and process limitations which currently make pre and post-combustion CO₂ capture processes non-viable in many industrial applications. Through the development of innovative materials, membranes and membrane processes for CO₂ capture, the project aims to make possible a substantial reduction in energy penalty, a much lower cost and a reduction of CO₂ emissions.

This will allow for a radical step change in the deployment of Carbon Capture and Storage (CCS) technologies across EU industry, unleashing its potential for significant CO₂ emissions savings, which are key to reaching European targets for a more sustainable industry. In doing so, the project will seek strong collaboration with Korean counterparts on the basis of a common research path and strategy.

First EU-South Korea joint Workshop on "New generation high-efficiency capture processes", Trondheim 14-15/06/2017

The workshop is organized in the framework of the Projects funded by EC in the framework of Topic LCE-24-2016 "International Cooperation with South Korea on new generation high-efficiency capture processes" and will be held on June 15th 2017 soon after the 9th "Trondheim Conference on CO₂ Capture, Transport and Storage".

In line with the goal of this initial appointment NanoMEMC², GRAMOFON and ROLINCAP projects, all funded under the above mentioned topic, and their Korean counterparts will present each other focusing on their expertise and possible collaboration in the field of Carbon Capture. The workshop will be opened by keynote speakers introducing the CCUS current situations and policies in Europe and South Korea and will be ended by a poster session to allow all participants to present their expertises and latest works on carbon capture.

The final program of the first EU-South Korea joint Workshop on "New generation high-efficiency capture processes" is now available and can be found at the following [link](#).

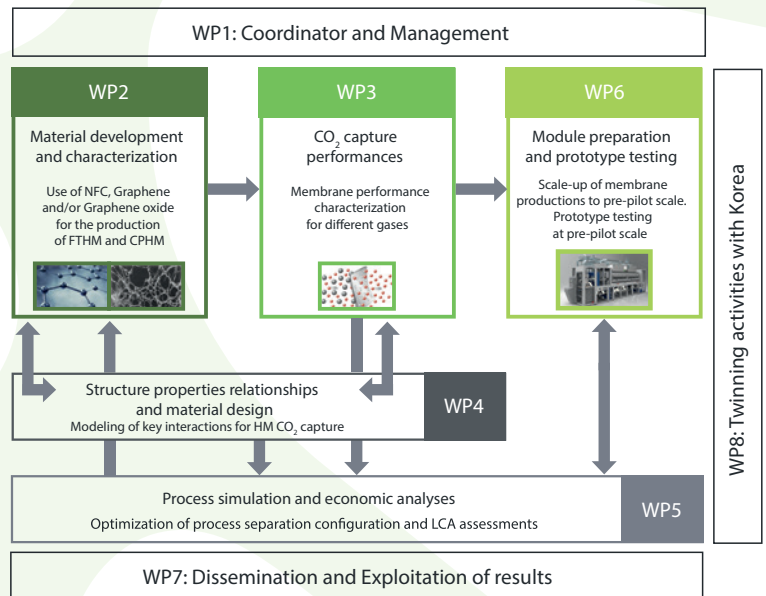
The joint workshop has been also supported by



the project

Membrane separation can be applied to many CO₂ capture processes from pre-combustion (CO₂-H₂ / CO₂-CH₄ separation) to post-combustion (CO₂-N₂) and oxyfuel (O₂-N₂) and is generally endowed with high flexibility and potentially low operating costs when compared to other capture methods. However, current materials lack the separation performance and durability needed for an efficient and economically feasible exploitation of such technology. The NANOMEMC² project aims to overcome current limitations by focusing on the development of innovative CO₂ selective membranes with high flux and selectivity, suitable for application to both pre and post-combustion capture processes.

Nanofibrillated cellulose (NFC), Graphene (G) and Graphene Oxide (GO) suspensions will be produced and appropriately functionalized for obtaining two different types of membranes: novel Facilitated Transport Hybrid membrane (FTHM) and Continuous Phase Hybrid Membrane (CPHM).



The general objective of the NANOMEMC² project is to contribute to a real and effective deployment of CCS technologies by reducing the cost and energy penalty of CO₂ capture through the development and optimal integration of innovative membranes for CO₂ separation within different energy intensive industrial processes.

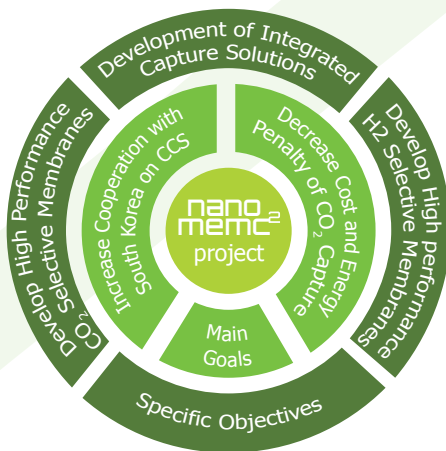
It will be implemented through the attainment of the scientific NANOMEMC² main goal: to fully develop the potential of membranes in the selective capture of CO₂ from gaseous emissions, increasing the efficiency of the capture step, and reducing the overall CCS cost below the value of 40€/tonne of CO₂ avoided. NANOMEMC² will focus on both pre-combustion and post-combustion strategies thus applying new membranes for separation of CO₂ on both fuels and flue gases.

The NANOMEMC² approach is to address, through process intensification and technological innovation, three of the highest priorities in the EU energy-intensive industry, namely:

- CO₂ emissions reduction (-35% for basic set up);
- Energy penalty (from current 30% of amine absorption down to potential 20% expected);
- Cost competitiveness (at least -20% for both CAPEX and OPEX).

The NANOMEMC² project will have relevant impacts in the EU industry and global markets, by:

- contributing to advance the knowledge on new materials, technologies and processes for cost-efficient and high-performance CO₂ capture;
- build a strong and concrete case for rapid industrial application;
- improving the competitiveness of EU industry;
- set up of a strong business model and related business plan for the NANOMEMC² innovations.





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www.carboncapture.eng.ed.ac.uk



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Which are the involved companies and associations and what they will do?



Founded in 1088, the Alma Mater Studiorum – Università di Bologna (UNIBO) is known as the oldest University of the western world. Nowadays, UNIBO still remains one of the most important institutions of higher education across Europe and the second largest university in Italy with 11 Schools, 33 Departments, about 3000 professors and researchers, and more than 84.000 students. With regard to the international reputation, UNIBO has been awarded the use of the logo “HR Excellence in Research” and is among the top 5 Italian universities in the main International rankings, e.g., 1st Italian university (182nd position) in the international QS – World University Rankings of the world best universities since 2010. UNIBO is one of the most important institutions of higher education across EU and the second Italian University in access to EU funding. UNIBO has gained a considerable experience in International and European research projects, successfully participated in FP7 with more than 275 funded projects in different specific

programmes (acting as coordinator in 58 of these, total budget 87.5 m€). On the European side, Unibo is member of the major European Networks and stakeholders thematic groups, such as: the European Climate Research Alliance (ECRA); the European Technology Platforms (ETP) SuSchem, WSSTP, BioFules; the Joint Programming Initiatives (JPI) Water challenges, FACCE, Oceans; the Public Private Partnership (PPP) Spire; the KIC Climate; the EIP Water Challenges. In addition Unibo is candidate of the consortium for the KIC RawMatters. In the first year of Horizon 2020, UNIBO won 63 projects for a total budget up to now higher than 14 m€.

NANOMEMC2 project in particular will take place in the Department of Civil, Chemical, Environmental and Material Engineering (DICAM) which is part of the school of engineering and architecture and is composed of more than 100 full time professors and researchers and about 150 PhD, Post Docs and graduate students. The research topics of the department cover very different areas and many different research group. Among the others the research group of Diffusion in Polymer focuses on the experimental analysis and modelling of mass transport in polymeric films and membranes in view of the optimization of materials properties for the applications of interest. This group will be involved in NANOMEMC2 where it will use the described expertise for the development and testing of membrane materials suitable for high efficiency carbon capture applications.

Role in the project

The UNIBO research unit will be the coordinator of the NANOMEMC² project and the leader of WP1 “Coordination and management”. Apart from that UNIBO will also lead WP2, related to the materials development where it will focus on the development of Facilitated Transport and Continuous Phase hybrid membranes for CO₂ Capture. UNIBO will be also involved in:

WP3, where it will test the membranes developed in WP2 in a wide range of operative conditions and with particular reference to pre-combustion capture applications for both CPHM and FCHM.

WP4 where it will focus on the development of structure properties relationship able to guide the material development and on the construction of macroscopic models for the description and prediction of membrane behavior in different operative conditions. These model will serve as a base for process simulation analysis (WP5) and system scale up (WP6).

WP7 and WP8 where, as Coordinator, it will have a significant role both in the dissemination and in keeping contact end ensure twinning activity with Korean Partner.



NTNU (The Norwegian University of Science and Technology) is a fully integrated university with emphasis on technology and engineering. It is the main technical university in Norway with over 80% of all master- and PhD degrees awarded in science and technology. NTNU is involved in a series of CO₂ capture projects in various areas, including various membrane technologies. Throughout the last decade several doctoral theses within these topical fields have been granted. The NTNU-led ECCSEL EU infrastructure project proves NTNU’s leading position in the field of CCS.

NTNU’s membrane group (Memfo) at the Department of Chemical engineering will contribute to the project. The group is highly recognized internationally, and is working on membrane material development, tailoring of membranes for specific separations, industrial applications and process simulations. Memfo is a core participant in the ECCSEL project. The advanced lab facilities at Memfo provide most of the facilities needed in this project. Memfo has been involved in many EU projects on CO₂ capture (e.g. DECARBIT, NanoGloWa, HiPerCap). Memfo is also partner in many national research projects like NanoMBE, MCILCO₂, BIGCCS, BIGCO₂, FSC-Membrane and Nagama. A very successful sample of CO₂ separation membrane development is the fixed-site-carrier membrane for CO₂ capture, where the group has several patents, and has demonstrated on pilot scale this membrane at a coal fired power plant in Portugal.

Role in the project

NTNU will lead the WP3, focused on testing the separation performance of the membrane synthesized in the WP2, with pure and mixed gas separation experiments in various conditions. Furthermore, NTNU will take part in the WP2, synthesizing hybrid membranes based on Graphene and Nanocellulose provided by partners and carrying out the characterization of these membranes in terms of chemical structure, morphology and water uptake. In the WP4, NTNU will carry CO₂ sorption tests and mechanical stability tests of the membranes under humid conditions. Finally, in the WP6 NTNU will be responsible for the subtask of upscaling the membrane production, by preparing pre-pilot membranes modules.



The College of Science and Engineering is one of the three academic Colleges at the University of Edinburgh. With nearly 2,000 staff and 7,500 students, it is one of the largest science and engineering groupings in the UK. It is also in the front rank of the UK University science and engineering groupings for research quality and research income. In the most recent (2014) UK Research Excellence Framework (REF) the College of Science & Engineering continues to be a top performer and was classified as world-leading in terms of originality, significance and rigour. The results reveal that overall 84 per cent of the University's research activity is in the highest categories – 4* and 3* – which are classified as 'world leading' or 'internationally excellent'. Edinburgh is also one of a select group of British universities to achieve outstanding results when demonstrating the impact of its research on wider society. More than half of its research in this category has been classed as 'world leading'. The College of Science and Engineering consists of seven academic schools: Biological Sciences, Chemistry, Engineering, GeoSciences, Informatics, Mathematics and Physics & Astronomy. One of the Universities fundamental missions is the advancement and dissemination of knowledge. With that in mind the College strives to produce graduates equipped for both personal and professional achievement and this is reflected through the up-to-date content of all teaching material to reflect the latest development in research and at the same time be responsive to the needs of employers and Industry. The College is also a key player in European research collaborations, participating in 125 projects in Framework 6, 235 projects in Framework 7, and 72 projects in Horizon 2020 to date. This includes 43 ERC awards and more than 90 Marie Skłodowska-Curie actions awards. In addition to successful participation in European projects, the College is home to one of the 2013 Nobel Laureate in Physics, Prof. Peter Higgs who discovered a mechanism that enables elementary particles to acquire mass and shares it with Prof Englert from the Université Libre de Bruxelles.

The School of Engineering

The School has wide-ranging, comprehensive and exciting research activities. The research is carried out in a broad scope of challenging engineering research themes within six institutes: Institute for Bioengineering (IBioE); Institute for Digital Communications (IDCoM); Institute for Energy Systems (IES); Institute for Infrastructure and Environment (IIE); Institute for Materials and Processes (IMP); Institute for Integrated Micro and Nano Systems (IMNS). Within the IMP, the carbon capture group has developed expertise in the detailed modelling and optimization of separation processes with over 6M Euros of funded research over the past 5 years investigating next generation separation processes based on adsorption and membrane systems with a wide range of experimental systems.

Role in the project

In this project, UEDIN will contribute in characterization of the materials produced by the partners in particular for permeation measurement of pure gases and mixture, including high temperature and high pressure measurements. UEDIN will also lead the molecular modelling activity of the project and participate in the process simulation. UEDIN has extensive experience in process flow sheet modelling and membrane separation processes. Finally UEDIN will coordinate the twinning activities with the Korean partner.



The University of Sheffield is ranked as a world top-100 university. A member of the UK's prestigious 'Russell Group' of research-led institutions, USFD offers world-class teaching and research excellence across a wide range of disciplines. In 2011, it was named UK University of the Year by the Times Higher Education Awards. Over 86% of its research was considered as internationally recognised or World leading after the 2014 national Research Excellence Framework. The USFD Energy 2050 initiative at the university aims to develop a sustainable, affordable and secure energy supply for the future, focusing on advanced conventional power generation. The UKCCSRC's National Pilot-scale Advanced Capture Technology (PACT) Facilities, part of the Energy 2050 initiative, contributes towards USFD's technology evaluation in this

project. It enables R&D; technical feasibility and process assessments; technology validation and de-risking; process integration; testing of design concepts for scale-up; and support for operational experience.

Role in the project

The USFD team will contribute primarily to WP6, focusing on aiding the development, scale-up and construction of the membrane test module, as well as extensive testing of the pilot system when deployed at the PACT Facilities. Key performance indicators will be used to fully characterize and assess its operation and performance under a range of industrially-relevant environments, as considered and determined by the other WPs. We will also contribute to WP5 to develop state of the art physical sub-models. Links and interactions with WP2/3 are of paramount importance throughout the duration of the project and the team will also participate considerably in WP1/7/8, for coordination, management, dissemination and twinning activities.



BP is one of the world's leading integrated oil and gas companies. BP provides customers with fuel for transportation, energy for heat and light, lubricants to keep engines moving and the petrochemicals products used to make everyday items as diverse as paints, clothes and packaging. BP projects and operations help to generate employment, investment and tax revenues in countries and communities around the world. BP employs more than 80,000 people, mostly in Europe and the US. BP PLC is the parent company of the BP group of companies. The worldwide headquarters is in London. BP International Limited is the legal entity used by the corporate technology activity – named Group Technology. BP uses technology to find and produce more hydrocarbons, improve processes for converting raw materials and

develop lower carbon products. BP employs more than 2,000 scientists and technologists. In 2013 BP invested \$707 million in research and development (2012 \$674 million). Group Technology is the department in BP which holds the centre of expertise for carbon management technologies including CO₂ Capture and Storage (CCS). Group Technology has more than 10 years of experience covering research, development and demonstration of CCS technology including the In Salah CCS project in Algeria where more than 3 million tonnes of CO₂ have been stored in a deep saline formation. The Group Technology team has expertise in process modelling, economic assessment of process technology and process development and scale up, together with knowledge of CO₂ capture technology, natural gas processing, hydrocarbon reforming, H₂ production technology and gasification.

Role in the project

BP will make significant contribution to Work-Package 5 "Process Design and Simulation" and Work Package 7 "Dissemination and Exploitation of Results". BP has knowledge and experience of a number of CO₂ capture technology evaluations and bench-marking studies including cost-estimation methodologies from Europe and North America that will be useful. BP has delivered innovative results through process synthesis in similar projects. BP will participate in setting-up and delivering the results of Work-Package 5 by participating in idea generation/brainstorming and review/development activities. BP has experience of building techno-economic models and producing results. In this project BP will help to develop the approach and act as reviewer of the output. BP will provide input and help to review the output from Work-Package 7. BP has back-ground knowledge and experience of energy markets in Europe and across the world including policy and regulatory developments and how they might drive the demand for low-carbon technologies including CCS. As an operator and end-user of energy technologies BP is a potential future customer for the technology and will bring input from this important perspective. BP also has knowledge of state of the art technologies and other emerging technologies in terms of performance and cost and will bring this input into this analysis. As the leading participant in the CO₂ Capture Project (CCP), which is a collaborative project involving oil and gas companies with world-wide operations, through a joint work-shop BP will facilitate the dissemination of project deliverables to CCP and feed-back to the project on the technology in development and the dissemination and exploitation of results.



Colacem is one of the youngest Italian cement producers; however it has consolidated itself as the third company present on the Italian market and, indeed, thanks to the strategic positioning of some of its plants, as the first when it comes to exports. A great deal of the factors that have driven such a rapid growth may be attributed to its vision, which has always been market-oriented and rooted in technological innovation and sustainability. In a sector of industry that contemplates huge volumes and with a strong incidence of energy costs, a key to success has certainly been the availability of highly efficient plants, that are able to reduce both loss of energy and of raw materials. All this thanks to the will of always targeting the use of the best available technologies on the market and on the continuous upgrading of its plants, that today may well be considered amongst the most advanced in Europe.

Colacem, as main company of the "Financo" Group, reaches a domestic production of around 3,6 million tons thanks to its 7 Italian plants located in Caravate (Varese), Rassina (Arezzo), Ghignano (Perugia), Sesto Campano (Isernia), Galatina (Lecce), Modica and Ragusa (Ragusa). The Company is also present internationally in 3 different continents, with various plants (in Tunisia, Dominican Republic, Canada and Albania) and terminals (in Spain, Jamaica and Haiti). Colacem headquarters are located in Gubbio (Perugia).

Role in the project

Colacem will support the project by designing and constructing the pre-pilot test rigs to be installed in one of its Italian Cement Plant. Process simulation and modelling will be considered in order to study the integration of new materials and technologies in already existing cement plant. Colacem will support the project also providing all necessary data regarding the gas composition at the stack emission point and eventually its possible modification with respect to temperature, pressure and humidity. Colacem technical staff at plant level will support the pilot plant test by adapting the gas sampler to its stack emission and furnishing all services eventually necessary (i.e. power supply, water, air compression service line, etc.) Colacem, during the pilot plant test, will also record all the cement kiln process parameters for further evaluation and comparison. Colacem will join the consortium aiming to develop its interest in the field of CO₂ capture and its presence in the consortium will guarantee the focus will be maintained on the industrial implementation at the same time Colacem will help guiding the research towards industrially exploitable results, throughout the whole duration of the project.



Fujifilm Manufacturing Europe belongs to the multinational Fujifilm Co. Ltd, and is the major production organization of Fujifilm in Europe. After the decline of the traditional photo film market, Fujifilm was capable to expand their presence in new business domains, inspired by the ambition to develop products and services that “add beauty to life”. A long history of sustainable growth could be continued. This European Fujifilm organization materializes the company strategy by development of novel ground-breaking products in the field of membranes, bio-materials and atmospheric plasma processes (for sustainable manufacturing solutions). Fujifilm Manufacturing Europe has in the Netherlands a Corporate R&D Department with 100 scientists, and several manufacturing lines. An Open Innovation strategy and a vital communication network with major Innovation centres in Europe is an important asset, leading to participation in a multitude of European projects, frequently as coordinating beneficiary (in 4 running projects, at present). Fujifilm Manufacturing Europe has the ambition to transform their proprietary gas selective membrane technologies into one of their major solutions for CO₂ capturing in Europe, providing opportunities for production of a variety of sustainable products adding to a solution for the environmental challenges which Europe is facing today. Fujifilm has recently established 5 state-of-the-art windmills on its site in the Netherlands which generate the electrical power for the daily operations of several manufacturing facilities, to move the company forward to a fully sustainable CO₂- neutral manufacturing platform. The gas selective membrane manufacturing, envisioned as a result of this project, will operate with use of this windmillbased electrical power sourcing in a complete CO₂-neutral setting.

Fujifilm will develop innovative continuous phase hybrid membranes (CPHM), being nano-structured membranes, designed for the tuning of sieving effects towards different gasses by control of the membrane interphase interactions, leading to beyond the state of the art selectivities, with a focus on pre-combustion carbon capture solutions (a.o. CO₂/CH₄). Fujifilm will also design the spiral wound modules based on both FTHM (WP2 and WP6 task 6.1) and CPHM (WP2) sheet membrane recipes. This task will include preliminary engineering design, pre-prototype and prototype making. These modules will be assembled in the pilot facility of Fujifilm, where spiral-wound modules are being produced since September, 2014 when the pilot line was officially launched. Fujifilm has a research team of 30 members active in the field of novel membrane technologies. Fujifilm has all pilot plant facilities required for scaling up of coating processes, and for design and making of modules for gas selectivity tests under real harsh conditions (simulating the industrial environments).

Role in the project

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SUPREN acts as open innovation partner for the process industry in joint projects, bringing in its experience and generic knowledge in different fields of process development and optimization: conceptual process design (reaction and separation), process intensification, energy efficient processes, energy integration, process integration, system integration, process modeling, process simulation, process optimization, techno-economic evaluation of processes, development of computer aided process engineering (CAPE) tools. The key scientific staff of SUPREN involved in this project has up to 20 years of experience in business life, providing independent services in research, development and innovation to enable sustainable production processes, either in new process developments or revamp of existing processes.

SUPREN's focus is always on developing or improving the sustainability, mass and/or energy efficiency of processes, considering their environmental impact and economics. SUPREN is member of: Energy Efficiency Export Initiative, launched by the German Ministry of Economics and Technology, (www.encyency-from-germany.info/en); Cluster EnergyRegion.NRW, organized by the energy agency of the State of North Rhine-Westphalia, Germany (www.energieregion.nrw.de); DECHEMA, the German Society for Chemical Engineering and Biotechnology, (www.dechema.de); SUSCHEM, the European Technology Platform for Sustainable Chemistry (www.suschem.org); A.SPIRE, the association representing the private sector in the Sustainable Process Industry Public-Private Partnership under the European Framework Program Horizon 2020 (www.spire2030.eu).

Regarding other EU projects in the context of CO₂ capture, SUPREN's key scientific staff has been involved in CACHET (FP6) and is involved in INTERACT (FP7, see www.interact-co2.eu).

Role in the project

Considering their knowledge and experience in process development and engineering of whole processes, plants and sites, SUPREN will mainly contribute to RTD WPs: SUPREN's is workpackage leader of WP5 on process modeling, optimization and assessment. SUPREN is partner in on material modeling (WP4) and module development and industrial testing (WP6). Furthermore SUPREN contributes to the twinning activities (WP8) as well as to dissemination and exploitation (WP7) activities.



InoFib develops, manufactures and sells nanocellulose through patented processes, especially microfibrillated or nanofibrillated cellulose (MFC or NFC) based products. Originated from wood, this renewable and abundant material reveals great opportunities for a large range of application. Cellulose nanofibrils are completely bio-sourced and look like extremely thin filaments. The amazing mechanical properties (Kevlar-range) and great barrier properties provide this material with a promising future.

Role in the project

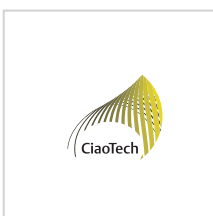
InoFib will be in charge of the production and the chemical surface modification of nanofibrillated cellulose at lab scale in order to obtain new membranes for carbon capture. It is clear that InoFib is the good partner to develop this kind of materials thanks to its knowledges related to nanofibrils of cellulose.



GNext is a SME that developed a unique technology to produce and use graphene. The company was found in 2013 by private founding and is managed by Simone Ligi one of the shareholder. GNext structure got two permanent employees and various temporary collaborators.

Role in the project

WP2 Nanomaterials and membrane production – GNext is a relatively young company but relying on a solid background; our team members have been actively working in developing graphene applications since 2008. Our strong expertise, both in academic research and industrial production, is the backbone of the company. GNext already boosted the transition from lab scale to industrial production of various graphene-based material. Our method of graphene production (patented) has many advantages as compared to the actual state of the art. Besides the low costs of production and the high quality of our graphene, the material is dispersed in water medium and the manufacturing process does not involve the use of any toxic or harmful exfoliating agent, neither any dangerous technique nor equipment. The whole production and processing is performed at low temperature, allowing simple processing on any polymeric substrate. The new technology allows producing composite, coating and inks to be used with standard industrial technologies, thus allowing an easily and straightforward industrial production of new developed material. GNext is taking advantage of its knowledge by reprocessing also third party graphenes. Powdered graphene or graphene derivatives might be difficult to handle or process, due to their low apparent density and to the strongly hydrophobic behavior. We rework these materials in order to improve the polymer dispersion and flake wettability, this treatment guarantees a better matrix dispersion and reduces the amount of fines during the use. Our company has already experience on membrane development for gas separation and we are confident in bringing a strong added value to the development of the materials seek in this project.



Ciaotech, part of the PNO Group, is specialised in Innovation Management and funding, providing support services to private and public organizations in Innovation processes, Technology Transfer, IT solutions and funding for research, development and innovation. PNO is a European group, made up of a pool of around 250 professionals including scientists, engineers, consultants, a Brussels policy advisory service, as well as financial and legal experts, with consolidated experience in innovation processes and funding in international working environments (Europe, Latin America, and USA). Created in 1985, PNO is a high-growth knowledge intensive company, operating in 12 European countries. The growth is explained by a unique combination of services, based on profound insight in research, innovation and funding

strategies, up-to-date knowledge and over 25 years of hands-on expertise with real-life European innovation projects and more than 500 funding programmes in most EU countries. The company has the proven capability to link innovation suppliers and adopters from a unique Europe-wide client network in multiple sectors, using advanced methodologies, ICT solutions and proprietary on-line networking.

PNO has its own community building, management and dissemination tools, the core one being Innovation

Place © www.innovationplace.eu. With Innovation Place, PNO offers its clients an innovative service concept, up-to-date web-based tool, knowledge base and European wide communities to manage their own innovation, projects, funding knowledge and networks, combined with the best consultancy support. As key advisor to the European Technology Platform (ETP) SusChem, the European Council for the Chemical Industry (CEFIC) and Association SPIRE PNO supports the development of medium to long term research and innovation agendas for resource efficiency, amongst others supporting the drive towards the security in Critical Raw Materials. Furthermore, PNO recently co-managed the process of developing a Public Private Partnership and the SPIRE 2030 Innovation Roadmap (www.spire2030.eu) for the sustainable process industry, as well as the new Vision and Strategic Innovation and Research Agenda of WssTP for the innovation in the field of Water, as input to HORIZON 2020.

Role in the project

PNO will be the leader of WP7 on Dissemination and Exploitation activities, including stakeholders analysis and mapping, Business and exploitation plan, dissemination strategy and activities. Moreover it will lead LCA and technoeconomic assessment activities in WP5. Participation to main testing activities in WP6 will be also ensured so as to collect relevant data for LCA and techno-economic assessment.



NanoMaterials Enhanced Membranes for Carbon Capture

For more info about the project visit the NANOMEMC² website at: www.nanomemc2.eu



Nanomemc² is a project funded by the European Commission. This project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement n° 727734