



# NEWSLETTER

of BS-ERA.NET Project

Networking on Science and Technology in the Black Sea Region



## HIGHLIGHTS

- *BS-ERA.NET Pilot Joint Call implementation*
- *CORDIS News*
- *News from the Black Sea Region*

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## PILOT JOINT CALL NEWS

### H2S PROTON

The H2S PROTON project is running its 5th month. During this period the consortium has made progress mainly on WP1 concerning the preparation and characterization of materials (solid electrolyte, electrodes) and in parallel has already started to prepare the experimental flow systems for their testing (WP2). Specifically, in the kick-off meeting, held on March at CERTH/CPERI, the consortium decided on the materials that will be employed for cell construction. BZY perovskite type oxide will be used as proton conducting and H2S tolerant solid electrolyte, while LSCF perovskite will serve as cathode electrode. In the case of anodic electrodes, the consortium will emphasize on both bi-metallic composites and perovskite catalysts containing lanthanum, strontium, vanadium, and titanium.

In this context, CERTH has already started the preparation of BZY, LSCF and Cu-based anodic composites, while YU will soon start the synthesis of perovskite catalysts. For the BZY synthesis the solid state reaction method was used, while for LSCF the citrate process was selected. Both samples have already characterized using the XRD and SEM/EDAX techniques. In the case of Cu/CeXLn1-XOZ catalysts the wet impregnation technique was employed. All catalysts samples have undergone various physicochemical characterization studies including BET, ICP, XRD, and XPS techniques.

During this month all prepared samples (100 gr batches) are planned to be sent to KIT to characterize the interface integrity and corrosion rates of support metals and ceramic materials and electrodes. KIT is presently building up the corresponding set up. The components that were ordered externally have been received. Other parts are presently in preparation in KIT's workshops. The set-up consists of a gas mixing unit with six mass flow controllers, a tube furnace with an alumina sample holder, a water vapour generator, and an exhaust gas scrubber. Processes for preparation of protective alumina coatings by magnetron sputtering (reactive pulse mode) on flat substrates as well as on a porous high-temperature resistant metal have been successfully developed. KIT also started to develop sputter deposition processes for an Al-Si alloy and plan to prepare alumina/silica mixed oxides as well as YSZ-type coatings as candidates for protective coatings of the metallic electrochemical separation cell.

Finally, the Consortium and Umbrella Agreements have been completed while the H2S PROTON website is scheduled to be launched at the end of July 2012.

### Innovative materials for waste water purification systems to be installed in tourist and other small polluting objectives on the Black Sea coast - IMAWATCO

Till now researches were performed by all 4 partners according to the working plan.

The coordinator, INCDP- ICECHIM Bucharest researched the obtaining of the multifunctional ultrafiltration membranes. The idea of the researches was to obtain the membranes from a blend of polymers, so that, by a functionalization of one or another component to get the desired versatility. There were performed researches for the determination of polymer concentration and blend composition by rheological studies on the concentrated solution. Then a study was dedicated to the determination of the composition of the phase inversion phase bath. It was proved that by and appropriate choosing of parameters for the polymer solution preparation and for phase inversion the pores dimensions can be tailored. The ultrafiltration membranes were characterized by, optical and SEM microscopy, FTIR and thermal analysis.

The partners from Bulgaria worked together in order to obtain activated carbon from peach stones and from furfural/coal tar pitch. The specific surface varied between 500-800 m<sup>2</sup>/g, depending of the synthesis conditions. It was also assessed the influence of the amount of activated carbon (800 mé/g I<sub>2</sub>, from peach stones) on the removal of detergents and the corresponding absorption isotherms. Also there were determined absorption isotherms for some zeolites.

The Turkish partners worked on cation exchange properties of clinoptilolite samples from Bigadic, Gordes and Marsid Regions. The best results were obtained with Marsid clinoptilonite, from Romania. The influence of the acid and base treatment of the zeolites on the absorption isotherms was also checked.

Two workshop meetings took place: the first in 2011 in Romania and the second in May 2012 in Bulgaria.

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## EC News

### Competitiveness Council: Innovation ministers discuss ins and outs of Horizon 2020

Innovation ministers came together to discuss the Commission's proposals for Horizon 2020 at a Competitiveness Council meeting in Brussels on 21 February. The plans for a new streamlined EU research and innovation funding programme, set to kick off in 2014, were outlined by Research, Innovation and Science Commissioner Máire Geoghegan-Quinn on 30 November 2011.

At the meeting, presided over by Danish Minister for Science, Innovation and Higher Education Mr Morten Østergaard, ministers discussed cross-cutting issues within the Horizon 2020 programme, with a particular focus on the role of social sciences and humanities, as well as small and medium-sized enterprise (SME) participation. All delegations expressed their support for facilitating SME participation in the innovation process.

The Commission's draft plan states that the EUR 80 billion Horizon 2020 budget will focus on supporting excellence in the science base, tackling societal challenges and securing industrial leadership and competitive frameworks.

Addressing ministers at the end of the meeting, Commissioner Geoghegan-Quinn assured them that social sciences and humanities would be given adequate attention: 'The social sciences and humanities will be fully integrated within the three main pillars of Horizon 2020, and they will be included as an integral part of the activities to address all societal challenges, working beyond the silos of distinct disciplines. It is imperative that we better understand the challenges before we embark on specific solutions.'

For more information, please visit:

Council of the European Union:  
<http://www.consilium.europa.eu/homepage?lang=en>

Horizon 2020:  
[http://ec.europa.eu/research/horizon2020/index\\_en.cfm?pg=home](http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=home)

### The Republic of Moldova joins EU Research Programme

The European Union and Moldova have today forged closer ties on research and innovation. Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science and Gheorghe Duca, President of the Academy of Sciences of the Republic of Moldova, have signed a Memorandum of Understanding for the association of Moldova to the EU's Seventh Research Framework Programme (FP7). This will allow Moldovan scientists, research institutes, universities and companies to collaborate with their counterparts across Europe in key research areas, while strengthening their own research expertise and capacity. In practice they will compete for research funding on an equal footing with counterparts in EU Member States. In return

Moldova will make a contribution to the overall FP7 budget, calculated on the basis of its GDP. The Republic of Moldova will be the 14th country associated to FP7.

### Euroscience Open Forum

The Euroscience Open Forum (ESOF) is Europe's largest general science meeting and is held in a leading Europe city every two years. ESOF 2012 will be hosted in Dublin, Ireland on 11-15 July 2012. ESOF is an interdisciplinary, pan-European meeting, which showcases the latest advances in science and technology; promotes a dialogue on the role of science and technology in society and public policy; and stimulates and provokes public interest, excitement and debate about science and technology.

The event is unique in the diversity of delegates who attend. It attracts top researchers from the natural sciences and the social sciences; business leaders; senior EU and government officials; and international scientific media. They come to discuss the best of European science and to address all of the current major global scientific challenges, including Energy, Climate Change, Food and Health.

Participants come to learn at first-hand of the latest advances in science and technology; to participate in debates on important, contemporary issues for science and society; to contribute to discussions on European policy; to engage with and question the leading international researchers in their fields and to meet old friends and make some new ones. ESOF2012 will attract researchers from across Europe and beyond, thus providing fantastic networking opportunities.

Full information, including the programme and registration details, is available at the ESOF Website: <http://esof2012.org/>

### International dimension of the 2012 Work Programmes

The 2012 FP7 work programmes were adopted by the European Commission on 19 July. The first series of calls for proposals, with a budget of over €5.3 billion was launched on 20 July. The main focus of the calls is the integration of research with innovation to tackle societal challenges and create sustainable jobs and growth by giving Europe a lead in the key technology markets of the future. All of the calls are open for the participation of non-European researchers and/or research organisations working alongside their EU counterparts.

The below slides, which cover all major partner countries and/or regions set out this international dimension of the work programme and aim to provide researchers working in non-EU countries with a brief overview of the content of the work programme and the current calls, and highlight some specific topics which may be of particular interest.

Full information on participating in these topics or any other part of the current calls, can be found on the Participant Portal. International researchers are also encouraged to liaise with the FP7 Contact Points established in their country, who act as local sources of guidance and information on FP7.

Source: <http://ec.europa.eu>

## News from the Region

### Development of the UNDP project “Ecosystem Based Management of Black Sea Living Resources and Strengthening the Permanent Regional Governance Project” for the Black Sea

In support of the Black Sea countries' efforts to reduce depletion of living resources including fishing stocks and in support of the Black Sea's regional environmental governance framework including the Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention), the Black Sea countries through the Permanent Secretariat jointly with UNDP Bratislava Regional Center are developing a new project to address the Ecosystem based management and conservation of aquatic bioresources, strengthen regional environmental governance and climate change in the Black Sea region to be submitted for the Global Environmental Facility co-financing. Key components to be implemented by the project include developing and supporting the finalization and signature of the Legally Binding Document on Fisheries, and adoption of new protocols to the Bucharest Convention, support to region wide monitoring promoting active stakeholder involvement in the governance, as well as measures to adapt to climate change.

The recently held consultation meeting (24 May 2012) between the Regional Technical Advisor of the United Nations Environment Program (UNEP) at Europe and CIS Bratislava Regional Centre, Mr. Vladimir Mamaev and the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution on the issue of joint development and implementation of the upcoming project focused on coordination activities in the project preparation phase. The Permanent Secretariat offered its full support to the project preparation phase.

“The project will address important Black Sea regional needs, and I am confident of its successful implementation. I would like to thank the Members of the Black Sea Commission and its Permanent Secretariat for their commitment and support.” Mr. Mamaev said.

For more information: <http://www.blacksea-commission.org/>

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### Launch of the IEBSA project “Industrial Evolution in the Black Sea Area - Examples from Greece, Romania and Armenia”

April 1, 2012 marked the start of IEBSA project in the framework of Black Sea Basin Joint Operational Programme with participation of National Academy of Sciences of Armenia and partners from Greece and Romania.

The IEBSA project kick-off meeting was held on June 7-8, 2012 in Yerevan, Armenia. All the partners and the experts involved met to discuss project management to achieve the most centralized and successful implementation of the project.

The project is aiming to achieve strong regional partnerships and cooperation among the participant organizations, and also to bring together the people of the Black Sea Basin, especially from the three participant countries – Greece, Romania and Armenia.

The main subject to be examined during the implementation of the project is the industrial evolution in the participant countries. The investigation will be focused on the socio-economic and cultural effects in the society originated from the evolution in the industrial sector.

The main output of the project will be the creation of an exhibition on the material which will be found during the investigation. This exhibition will present the industrial history in each country and also will try to highlight common elements, problems – which would probably characterize the industrial route in the study area.

The exhibition will take place in Greece, Romania and Armenia.

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### New book: The Dynamics of Black Sea Subregionalism

This book is by far the most complete and comprehensive presentation to date of the origins, evolution, current state of affairs and actors involved in the process that is shaping the identity of the Black Sea regionalism by Panagiota Manoli. Panagiota Manoli is Lecturer of Political Economy of International Relations at the Department of Mediterranean Studies, University of the Aegean (Rhodes - Greece).

### Forum on “Academic Cooperation for Peace & Welfare in the Mediterranean & Black Sea Region”

Tirana, Albania, May 16 - 19, 2012

The Forum, organized jointly by Black Sea Universities Network, Réseau Méditerranéen des Écoles d'Ingénieurs, Community of Mediterranean Universities and UN Academic Impact, is intended to be a major event that gathers rectors, senior university managers and decision-makers from the fields of higher education, scientific research and technology transfer, academics etc., interested in the active involvement of universities in the cooperation for the re-construction of sustainable peace and welfare in the region.

#### Armenia

##### The Thirty-Ninth PABSEC General Assembly

The Thirty-Ninth General Assembly of the Parliamentary Assembly of the Organization of the Black Sea Economic Cooperation was held in Yerevan on 22 – 24 May 2012 upon the invitation of the National Assembly of the Republic of Armenia.

The topic of the General Debate was “Information and communication technology – promoting sustainable economic development”.

The PABSEC members conducted debates on the Reports drafted by the PABSEC specialized Committees during their spring meetings on: “Improvement of Taxation Systems in the BSEC Member States”; “Perspectives of development of the wine-growing and wine-making sectors in the BSEC Member States”; “Implementation of the agreements among the BSEC Member States on combating organized crime” ; “PABSEC Regulations on Elections”; “Lifelong learning in the BSEC Member States” and “Child protection in the BSEC Member States: an assessment of recent developments”. The Assembly adopted Recommendations on these subjects addressed to the Parliaments and Governments of the Member Countries and to the Organization of the BSEC.

The Assembly granted the Observer Status with the PABSEC to the Interparliamentary Assembly on Orthodoxy (IAO) and to the Parliamentary Union of the OIC Member States (PUIC).

#### Greece

##### 5th International Black Sea Symposium “The Black Sea region as an influential crossroad between East and West: A path towards extroversion”

In its fifth year, the International Black Sea Symposium (IBSS) project builds on the success and positive impact of its previous four editions and brings together the next generation of stakeholders with an interest in the Black Sea area. The 5th International Black Sea Symposium on “The Black Sea region as an influential crossroad between East and West: a path towards extroversion” was held in Athens, Greece, from 2 July to 4 July 2012.

More information at: <http://www.icbss.org/>

#### Romania

##### 3rd International Symposium on the Geology of the Black Sea Region

The Third International Symposium on the Geology of the Black Sea Region was held in Bucharest during October 1-10, 2011. The symposium covers topics related to the geology of the circum-Black Sea region and the evolution and history of the Black Sea. The meeting was held under the auspices of the National Authority for Scientific Research through the National Institute of Marine Geology and Geoecology.

#### Turkey

##### 20th Anniversary Istanbul Summit

The Twentieth Anniversary Istanbul Summit of the Organization of the Black Sea Economic Cooperation (BSEC) was held on 26 June 2012, in Istanbul. It marked the 20th anniversary of the launching of BSEC at the Istanbul Summit, on 25 June 1992.

The event, which was hosted by the Republic of Turkey was Co-Chaired



by the President of the Republic of Serbia H.E. Mr. Tomislav Nikolic, representing the current Chairmanship-in-Office of BSEC and the President of the Republic of Turkey H.E. Mr. Abdullah GÜL, representing the Host Country and the incoming Chairmanship-in-Office. In the speech "Black Sea Economic Cooperation: the goals for the future Black Sea Economic Cooperation", Maria Damanaki European Commissioner for Maritime Affairs and Fisheries highlights importance of further development of practical cooperation in this region to increase "economic benefits and social opportunities for people, and ensuring sustainable economic development".

She said: There are two main fields of action for the European Union: We intend to revitalize the Black Sea Synergy initiative as our contribution to the regional cooperation. We have chosen to focus on a number of sector-specific Partnerships, in the environmental domain, on maritime issues and beyond.

We are also committed to link the many instruments at the EU's disposal together in a coherent way so as to enhance our overall contribution to Black Sea regional cooperation.

One of the main outcome documents of the Summit is the Istanbul Summit Declaration. With this Declaration, the Member States renewed their commitment to the BSEC process at the highest level.

More: <http://www.bsec-organization.org>

### Ukraine

#### Black Sea Outlook

The third Black Sea Commission (BSC) Scientific & Final UP-GRADE BS-SCENE EC Project Conference was took place in Odessa, Ukraine on 31st October - 4th November 2011. The Conference has a number of sessions of which one will be dedicated to data management, data infrastructures and data accessibility.

This targets the Upgrade Black Sea SCENE infrastructure developments and its relations with SeaDataNet and EMODnet, in particular the EMODnet Chemistry project in connection with the Marine

## Upcoming Events

#### Black Sea Economic Forum

The III International Black Sea Economic Forum will take place in the historic Livadia Palace in Yalta, on October 4-5, 2012, hosted by the Council of Ministers of the Autonomous Republic of Crimea. Continuing the successful tradition, this year Forum will provide a great platform for discussion of regional economic growth, development of perspective partnerships and joint projects and promotion of the innovative solutions in the region.

The 2012 International Black Sea Economic Forum "Reinforcing competitiveness of the Black Sea Region: joint efforts and projects" will address crucial topics necessary to ensure effective structural reforms and attractive investment policy striving to improve standards and quality of life. The Forum agenda will cover such important issues as energy efficiency and energy saving policy, investment policy and strategic points of growth, trade enhancement, improvement of transport industry and export-import operations in the region, mechanisms to attract investment flows into

Strategy Framework Directive (MSFD), other marine environmental database and system developments in the Black Sea region etc.

More information at: <http://www.caspinfo.net>

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#### Third AER Black Sea Regional Policy Conference: Stepping up interregional cooperation in the Black Sea area: facing challenges - finding solutions

The AER Conference was held in Odessa, Ukraine during 11 May 2012. The key issues of the conference were Roadmap for the Eastern Partnership and European Neighbourhood Instrument with following conclusions: confirmation of the importance of the Black Sea area in terms of geostratic and environmental dimension; continued support and engagement for interregional cooperation programmes on European level must be ensured; necessity of strong institutional governance tiers which can support the interregional cooperation; there is still a strong need for capacity building; AER is going to support further interregional cooperation measures in the regions around the Black Sea; AER will also monitor the newly released Eastern Partnership roadmap and advising the European Commission on the needs of the regions around the Black Sea.

Source: <http://www.aer.eu>

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#### 9th International Conference "Black Sea Grain - 2012"

The conference was held on April 18-19, 2012 in Kyiv, Ukraine. The Conference objectives include discussion of the factors of agrarian and export policy development in the Black Sea region, growing influence of climate change on agricultural production, reveal the growing impact of capital markets on global ag development, potential for further costs increases in agricultural production, analysis of the growth of Asian economies and their role in the agricultural consumption, in order to forecast prospects for the ag sector in the 2012/13 season.

More information at: <http://www.caspinfo.net>

the agricultural sector, attractiveness and competitiveness of the tourism sector.

#### International Summer School on PEM Fuel Cells

The Accredited International Summer School on "PEM Fuel Cell Fundamentals" is organised by the European Commission, Directorate General Joint Research Centre (JRC), Institute for Energy and Transport (IET), United Nations Industrial Development Organization (UNIDO), International Centre for Hydrogen Energy Technologies (ICHET) and the Ovidius University of Constanta.

The Accredited International Summer School on "PEM Fuel Cell Fundamentals", as part of the JRC's Enlargement and Integration Action, has strategic objectives of:

- helping Candidate Countries and Potential Candidate Countries to familiarise with the "EU Acquis" in areas of the JRC
- contributing to the development of the European Research Area (ERA).

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