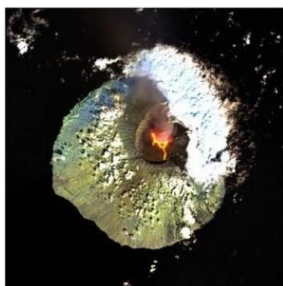


Cabeço de Vide´s mineral water and the origin of life on Earth



During November 2014, CERENA's researchers have performed a field work campaign at Cabeço de Vide Spa with colleagues from: NASA/Jet Propulsion Laboratory, Pasadena, California, USA (Dr. Ph.D Steve Vance), John Craig Venture Institute, San Diego, California, USA (Dr. Ph.D Shino Suzuki), Istituto Nazionale di Geofisica e Vulcanologia, Sezione Roma 2, Italy (Dr. Ph.D. Giuseppe Etiope) and from Tokyo Institute of Technology, Depart. of Earth and Planetary Sciences (Dr. Ph.D Yuichiro Ueno) in order to study the environments related with Cabeço de Vide's mineral water with its possible relation with Astrobiology and the origin of life on Earth and other planets like Mars.

CERENA helps to activate the Copernicus' service that obtained images of Fogo Volcano at Cabo Verde



Fogo Volcano, Cape Verde, started an eruption on November 23 with emission of gas and lavas, forcing the evacuation of the communities inside Chã das Caldeiras (~1000 people). Following a request for support on remote sensing monitoring of the crisis from the Instituto Nacional de Gestão do Território (Cape Verde), CERENA assembled a working group with ICIST and LNEC, which through the Portuguese Civil Protection, and in close collaboration with the Cape-Verde authorities, led to the activation in the early hours of November 25th of the Emergency Service Copernicus (emergency.copernicus.eu). The first image analyzed by the service provider Copernicus is a Landsat-8 acquired on the second day of the eruption, showing the advance of lavas in the Chã das Caldeiras floor.

Project Melodies- Exploiting Open Data



CERENA hosted the 3rd project meeting and the 1st Advisory board meeting of the FP7 [Project Melodies- Exploiting Open Data](#) from 18th to 20th of November 2014. This project led by University of Reading, gathers partners from UK Portugal, Spain, Italy, Germany, Greece, Czech Republic and Netherlands.

Conference: Biodiversity Change in the Anthropocene



by Maria Dornelas (19 December 2014, 10h, Anfiteatro do Complexo Interdisciplinar, IST-Alameda).

The man has become a major driving force of the planet's processes including prominent change in land cover, climate and biogeochemical cycles, and an unfolding mass extinction. Humans have modified the planet so profoundly scientists are arguing for a new geological era classification: the Anthropocene.

Maria Dornelas, young macroecologist, professor at the University of St Andrews, with an outstanding international curriculum, first author of Science and Nature publications, comes to Técnico on December 19, delivering a lecture summarizing one of their recent works in the area characterization and quantification of biodiversity: Biodiversity Change in the Anthropocene.

More Information about the conference and the speaker can be obtained [here](#).

Participation on a Conference

- CERENA's researchers José Manuel Marques and Ana Miller presented their work in the [14th European Astrobiology Conference](#), held in Edinburgh, U.K., from 12 to 17 October 2014: A.Z. MILLER, S. SUZUKI, J.M. MARQUES, C. ROCHA, G. ETIOPE, S. VANCE & L. CHRISTENSEN (2014) Morphological features of microorganisms dwelling in an active low-temperature serpentinization site, Cabeço de Vide, Portugal: a possible analogue to early Mars. Book of Abstracts, 14th European Workshop on Astrobiology (F. Westall & C. Cockell, editors): 129.
- The conference [XX Encontro Luso-Galego de Química](#) will be held in Porto, from 26 to 28th November, 2014. The following communications will be presented: - Santos, T., Puna, J., Gomes, J., "Determinação de curvas binodais para sistemas ternários contendo biodiesel álcool e água" – Guerra, L., Gomes, J., Puna, J., Rodrigues, J., "Produção de combustíveis sintéticos renováveis a partir de electricidade utilizando o conceito ELECTROFUEL" ;

Organizing a Conference

- The 6th International Symposium on Wetland Pollutant Dynamics and Control will be held in York, UK from 13th to 18th September 2015. The [WETPOL 2015 call for abstracts](#) is now open! The conference addresses the latest advances in the field of wetland nutrient and pollution transformations, ecosystem valuation and pollution control in natural and constructed wetlands. More Information could be obtained [here](#).

Papers Published

- Albuquerque P., Gomes, J., Pereira, C., Miranda, R., "**Assessment and Control of Nanoparticles Exposure in Welding Operations by Use of a Control Banding Tool**", Journal of Cleaner Production, 2014 DOI: 10.1016/j.jclepro.2014.11.010
- Elisabete R. Silva, Olga Ferreira, João C. M. Bordado, Maria J. Calhorda. "**Revestimentos Poliméricos Para o Controlo da Bioincrustação Industrial: Novas Estratégias Amigas do Ambiente**". Boletim da Sociedade Portuguesa de Química, Nº 134, Julho-Setembro 2014, 43-49.
- Gomes, J.F.P., Miranda, R., Carvalho, P., Quintino, L., "**The effect of metal transfer modes and shielding gas composition on the emission of ultrafine particles in MAG steel welding**" Soldagem e Inspeção, 19(2), 168-176 (2014). DOI: 10.1590/0104-9224/SI1902.09
- Pooja Vijay Ramamurthi, Maria Cristina Fernandes, Per Sieverts Nielsen, Clemente Pedro Nunes "**Logistics cost analysis of rice residues for second generation bioenergy production in Ghana**" Bioresource Technology Volume 173, December 2014, Pages 429–438