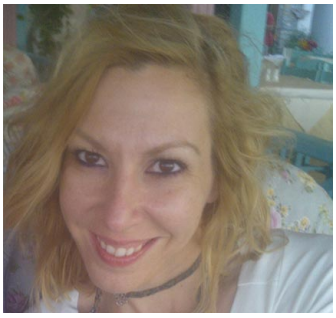
Event: **ENERGY in BUILDINGS 2017**
Date: Saturday October 21, 2017
Place: Athens, Hellas

WORKSHOP
Research and Innovation activities in nanotechnology concerning Energy Efficient Buildings

http://www.ecobinder-project.eu	**Chrysanthi Panagiotopoulou** Chemical Engineer, PhD, MSc	
Title:	Senior Researcher at National Technical University of Athens (NTUA), Athens, Greece	
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Project title:	Ecobinder	
Presentation title:	Development of insulating concrete systems based on novel low CO_2 binders for a new family of eco-innovative, durable and standardized energy efficient envelope components	

The ECO-Binder project aims to implement industrial R&D activities related to developing Belite-Ye'elimite-Ferrite (BYF) based low-CO_2 binders and demonstrating the possibility of replacing Ordinary Portland Cement (OPC) based concrete products with new ones based on the new Belite-Ye'elimite-Ferrite (BYF) technology. The new generation of concrete-based construction materials and prefabricated building envelope components are targeted to give a 30% lower carbon footprint, 20% better insulating performance and 15% lower cost than current solutions based on Portland cement.The new Building Envelope solutions will integrate multiple functions in a single product package:

- Acoustic insulation/absorption
- Fire resistance
- Dimensional Stability
- Indoor air quality
- Affordable cost

Within the ECO-binder project prefabricated concrete systems of different complexity and end-use will be installed in different climatic conditions for demonstration purposes. LCA will be performed to validate the construction materials sector's progress in developing eco-sustainable products with comparable performance to traditional products.

CV:	

Dr. Chrysanthi Panagiotopoulou graduated as Chemical Engineer from the National Technical University of Athens (NTUA).

Her M.Sc. degree in the field of Science and Technology of Materials during which she worked with geopolymers investigating their stability and durability in high temperatures.

Her Ph.D. thesis was «Synthesis and properties of geopolymers based on industrial minerals and by-products" in the field of Construction Materials. Geopolymers are a new type of binding systems that can substitute traditional-cement for a multitude of applications. Contrary to traditional cement, a variety of aluminosilicate raw materials and conditions can be applied for geopolymers synthesis, giving the new binders the unique ability to synthesize "tailor-made" and "application-oriented" products.

Currently, she is working as a research associate at the School of Mining and Metallurgical Engineering of "National Technical University of Athens" (NTUA) as a member of the "Raw Materials Exploitation & Sustainable Energy Solutions" team, led by Professor I. Paspaliaris. From 2011 to 2015 she was employed as a visiting lecturer at the "Engineer officers' Technical School" of the Hellenic Army teaching the subject of "Construction Materials". Furthermore, she has been involved in various European research projects as associate researcher, and is also actively involved in the preparation of proposals for European projects.

She has been a member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) since 2012.

Professionally her interests and goals lie in the wide field of construction materials and their applications and especially in the synthesis of novel materials that can induce environmental relief allowing at the same time the sustainability of the construction materials industry.