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## Formulation of Alternative Cement Matrix for Solidification/stabilization of Nuclear Wastes

This webinar discusses the formulation of an alternative cement matrix for solidification/stabilization of nuclear waste. The presentation provides an overview of the multiple complexities of waste management, and the many challenges that arise from it. Topics include a presentation of the French nuclear waste management methods, specific examples on solidification/stabilization of nuclear waste, the physico-chemical aspects of the interactions between the containment matrix and the waste, and the miniaturization of samples for the development of new matrices allowing human radiation protection. The webinar also highlights current experimental research focused on Portland cement and a magnesium potassium phosphate cement matrix. The latter is a promising cement for the stabilization/solidification of heavy metals. Other potential cementitious matrices will also be discussed.

### Free webcast

May 22, 2019 at 8:30 am EDT (UTC-4)

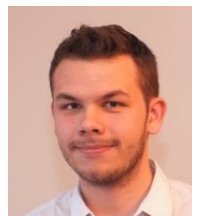


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Who should attend: policy makers, managers,  
regulators, students, general public

### Meet the Presenter...

**Mr. Matthieu De Campos** is a second year PhD student at the University of Lille, more specifically within the Solid Chemistry axis of the UCCS laboratory (Catalysis and Solid Chemistry Unit). He is a member of the research team CIMEND («Chimie, Matériaux Et procédés pour un Nucléaire Durable» i.e. «Chemistry, Materials and Processes for Sustainable Nuclear Activities»). This research team is involved in a joint laboratory between the University of Lille and Orano, the Laboratoire de Recherche Commun Cycle du Combustible et Chimie de l'Uranium (LR4CU) (for Joint Research Laboratory on Fuel and Uranium Chemistry). The LR4CU is focused on generating added value to fuel cycle by-products and optimizing nuclear processes. The aim is to increase the TRL levels for futures industrial applications. His PhD research aims at adding value to low-radioactive metallic materials, by considering them as reagents for the synthesis of cementitious matrix. His research activities, funded by Orano, are based on a multidisciplinary approach combining Civil Engineering and Solid State Chemistry. In 2017, he graduated from Artois University with a Masters' Degree in Materials Chemistry for Energy and the Environment.



*The Generation IV International Forum invites you to attend web-based lectures on the next generation of nuclear energy systems and other cross-cutting subjects. Join internationally recognized subject matter experts and leading scientists in the nuclear energy arena for these short presentations.*

### Upcoming Webinars

19 June 2019	Interaction JOG/Sodium in Case of a Clad Breach in a Sodium Fast Reactor, Mr. Guilhem Kauric
31 July 2019	Security Study of Sodium-Gas Heat Exchangers in Frame of Sodium-cooled Fast Reactors, Dr. Fang Chen
29 August 2019	Lead containing mainly isotope <sup>208</sup> Pb: new reflector for improving safety of fast reactors, Dr. Kulikov

For more information, please contact: Patricia Paviet at [Patricia.Paviet@pnnl.gov](mailto:Patricia.Paviet@pnnl.gov) or visit the GEN IV International Forum website at [www.gen-4.org](http://www.gen-4.org)