Position Title	PhD Studentship – Printable soft matter with self-healable and tuneable properties through supramolecular engineering
Project Abstract	Supramolecular polymers are emerging as alternative means to developing functional, responsive and engineered hierarchical materials. Unlike classical polymeric synthesis, their application as materials in additive manufacturing (AM) is, however, rather unexplored, but fast growing such as in the formation of novel and targeted biomaterials. Supramolecular building blocks provide the platform for non-covalent interactions, that can be capitalized on in the engineering of physical and mechanical properties, that are expressed in such bulk material. These non-covalent interactions, arising from hydrogen bonding and π- π forces, to strong metal coordination, can be tuned by ligand design, adding unique and controllable properties, through such 2D and 3D interactions. This PhD project will involve the development of such structures with a focus towards biopolymers such as Chitin and Chitosan. We will develop suitable formulations that allow for the 3D printing of functional structures.
Experience	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor's degree at 2:1 level or equivalent in a relevant subject such as Chemistry/Materials Science. Candidates should also have a strong interest in Additive Manufacturing/Sustainable Materials.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	TCD
Closing Date	Friday 29th June 2018
For more information contact	Prof. Thorfinnur Gunnlaugsson, gunnlaut@tcd.ie

AMBER,
CRANN Institute,
Trinity College Dublin,
Dublin 2, Ireland

T + 353 (0) 1 8963030
W ambercentre.ie
twitter @ambercentre

Ireland's European Structural and Investment Funds Programmes 2014-2020 Co-funded by the Irish Government and the European Union
European Union European Regional Development Fund
Science Foundation Ireland sfi For what's next