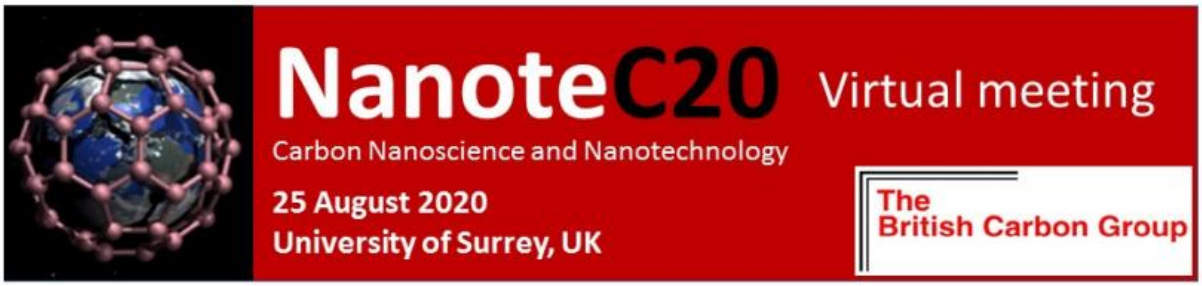


**NanoteC** is one of the longest running series of international nanoscale carbon conferences in Europe (since 1998). It brings together scientists working with nanoscale carbon materials: nanotubes, graphene, diamond- and fullerene-related nanostructures. While each of these materials attracts its own dedicated community of researchers, **NanoteC** draws on common themes and allows researchers to share insight into this unique element at the nanoscale.

Elemental carbon shows remarkable variety in properties via simple covalent bonding, however other systems (for example containing nitrogen or metals) are becoming important and provide alternative components with unique mechanical and electronic properties. Nanotechnology requires an understanding of these materials on an atomic level and this will be the central theme.

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# Enjoy the Conference!!!

# #10 - Fabrication and characterization of tectomer/$MoS_2$ nanosheet hybrids

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Amino-terminated oligoglycines self-assemble into unique peptidic two-dimensional nanostructures called tectomers [1,2]. The exceptional structural and surface chemistry properties of tectomers can be exploited for the fabrication of functional materials and devices [3,4], in particular with other two-dimensional nanomaterials, since the contact at their interfaces is maximized enabling their surface modification and processing [3,5]. Interfacing tectomers with $MoS_2$ nanosheets would therefore be an attractive strategy for tuning the physicochemical properties of this transition metal dichalcogenide [6]. In this work, $MoS_2$ dispersions in cyclopentanone were prepared by liquid-phase exfoliation [7] and tectomer/$MoS_2$ hybrid formation in cyclopentanone was achieved by phase transfer experiments from tectomers in aqueous solutions. Electron microscopy characterization reveals that $MoS_2$ nanosheet stick on the surface of tectomer platelets. X-ray photoelectron spectroscopy (XPS) characterization of the tectomer/$MoS_2$ hybrids showed n-doping of $MoS_2$, which was further confirmed by Raman spectroscopy. Interesting opportunities for a variety of applications in electronics, sensors, and smart textile technologies, to name a few, can be envisioned for the tectomer/$MoS_2$ hybrids reported here [8].

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