# O 3: Invited Talk Richardson (FV: DS+O)

Time: Monday 10:15–11:00 Location: H36

**Invited Talk** O 3.1 Mon 10:15 H36

**Some aspects of chirality in molecules adsorbed at metal surfaces** — •Neville Richardson — School of Chemistry, North Haugh, Univeristy of St Andrews, St Andrews, KY16 9ST, UK

It is suprisingly common for achiral molecules, even those with a high degree of symmetry as isolated species to give rise to chiral adsorbates, chiral molecular clusters and chiral two dimensional arrays. The drivers for such behaviour arise from the subtle balances between adsorbate-adsorbate interactions and adsorbate-substrate interactions. Important contributors to the former may be relatively isotropic Van der Waals' interactions or more directional interactions such as H-bonding, while the latter depends on the extent to which there is a preferred adsorption site and substrate induced orientation of the adsorbate. Because of the delicate balance of the varying terms in these interactions relatively small changes in coverage, temperature or the nature of either adsorbate or substrate can induce, modify or remove the chirality of the system. It remains a challenge to the community of those working on the theory of larger molecular adsorbates to predict the outcome of the two dimensional assembly of chiral systems.

Scanning tunneling microscopy supported by spectroscopic methods and low energy electron diffraction is ideally suited to monitoring and characterising this behaviour in adsorbed systems. In this presentation, several examples of organic molecules on metal surfaces, both from our own work and that of others, will be described to illustrate these phenomena.