Nuclear Research at Coventry University
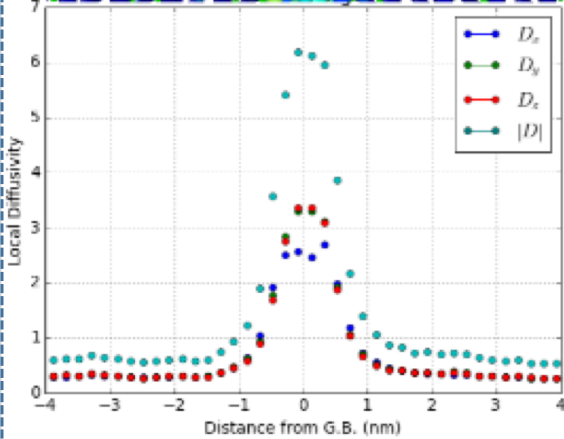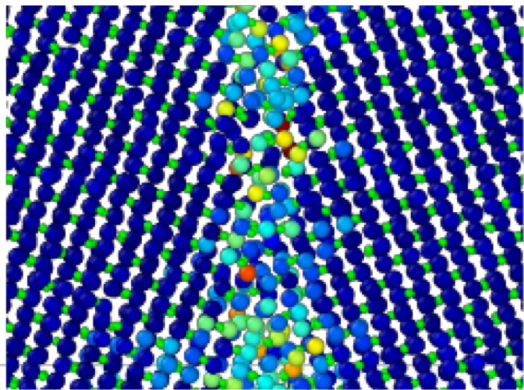
David Parfitt

Faculty of Engineering, Environment and Computing
Coventry University
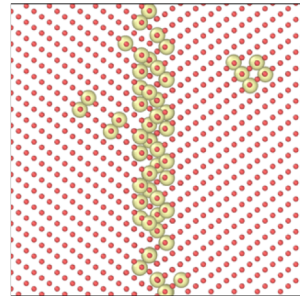
NAMD, University of Liverpool
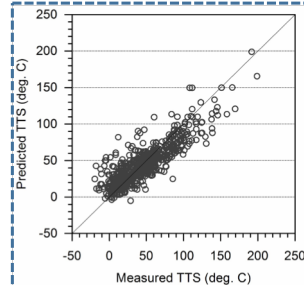
4th September 2018

Research Highlights

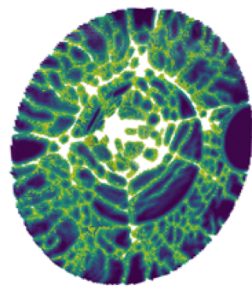Diffusion at grain boundaries in MO_2, M=U, Pu, Th, Ce

(a) Σ3 (110) theta = 70.53°

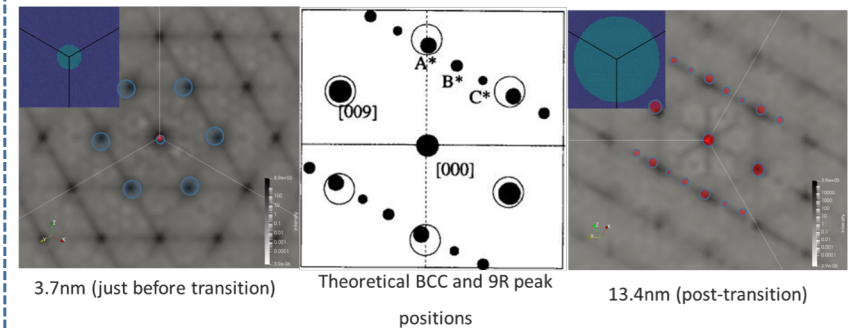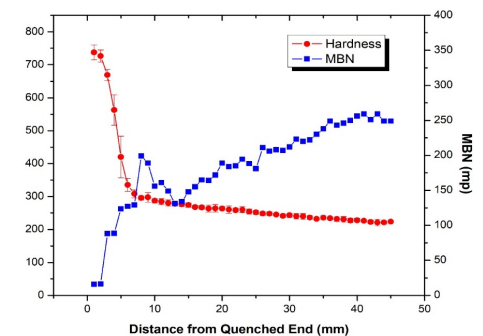Phosphorous diffusion and segregation to grain boundaries in pressure vessels

Artificial neural network modelling for nuclear applications

Peridynamics modelling of failure and fatigue in Ni-based alloys

Barkhausian Noise NDT measurements of neutron irradiated low alloy steels (*EU-NOMAD*)

3.7nm (just before transition)　Theoretical BCC and 9R peak positions　13.4nm (post-transition)

Modelling precipitation in low alloy steel pressure vessels using simulated selected area electron diffraction patterns