

Domain walls as new 2D functional materials

Monday 22 – Tuesday 23 February 2016 | The Royal Society at Chicheley Hall, Buckinghamshire

Organised by Professor Marty Gregg, Professor Marin Alexe and Professor Jim Scott FRS

THE
ROYAL
SOCIETY

Monday 22 February 2016				Tuesday 23 February 2016			
SESSION 1 Chair: Jim Scott FRS		SESSION 2 Chair: Marty Gregg		SESSION 3 Chair: Marin Alexe		SESSION 4 Chair: Gustau Catalan	
09.00	Welcome by Royal Society & lead organiser						
09.05	Ekhard Salje FRS Emergent properties in ferroic domain walls	13.30	Dennis Meier Transport properties in rare Earth manganites and multiferroics	09.00	Leo McGilly Controlling domain wall motion as a route towards new functionalities in $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ ferroelectric thin films	13.30	Mathius Kläui Ultrafast chiral domain wall dynamics due to spin-orbit effects
09.30	Discussion	14.00	Discussion	09.30	Discussion	14.00	Discussion
09.45	Pam Thomas Domain walls in periodically poled systems	14.15	Beatriz Noheda Novel materials at perovskite domain walls	9.45	Gustau Catalan Phase transitions at domain walls	14.15	Michael Carpenter Relaxation dynamics and pinning of domain walls coupled to strain
10.15	Discussion	14.45	Discussion	10.15	Discussion	14.45	Discussion
10.30	Coffee	15.00	Tea	10.30	Coffee	15.00	Tea
11.00	Stuart Parkin Domains and domain walls in ferromagnets and MIT systems	15.30	Jan Siedel New materials hidden inside old ones – the case of domain walls in multiferroic oxides	11.00	Patrycja Paruch Domain wall transport and novel device architectures in PZT thin films	15.30	Wojtek Zakrzewski Unconventional dipole order: skyrmion models in ferroics
11.30	Discussion	16.00	Discussion	11.30	Discussion	16.00	Discussion
11.45	Jens Kreisel Imaging Domain walls by Raman scattering and Photoelectron Microscopy	16.15	Marin Alexe Spintronic functionalities of domain walls in BiFeO_3	11.45	Alexei Gruverman Polarisation-enabled electronic transport in ferroelectric films	16.15	Jim Scott FRS Wrinkling, folding, vortex formation and delamination: four stages of ferroelastic domain bifurcations
12.15	Discussion	16.45	Discussion	12.15	Discussion		
12.30	LUNCH	17.00	CLOSE	12.30	LUNCH	17.00	CLOSE

Draft programme – correct as of 04/01/16 – subject to change