

Monday 20th September

Session 1: Dislocations

- 9.00 Laurent Pizzagalli
Core dislocations in silicon: new aspects from numerical simulations
- 9.50 Jean-Luc Demenet
Effect of electronic doping on the plasticity of homoepitaxied 4H-SiC single crystals
- 10.10 Nelly Burle
Multiple vectors dislocation sources in SiGe/Si studied by X-ray imaging and TEM

10.30 COFFEE

Session 2: Microscopy

- 11.00 Nigel Browning
High spatial and temporal resolution studies of semiconductor systems
- 12.00 Bernard Pichaud
Investigation of non-decorated glide dislocations in silicon by infra-red light scattering tomography
- 12.20 Yuki Tokumoto
Effects of phosphorus doping and annealing on dislocation structure in silicon
- 12.40 Yutaka Ohno
Doping effects on the stacking fault energy in Czochralski-grown silicon

13.00 LUNCH

Session 3: Mechanical Properties

- 14.00 Johann Michler
Sample size dependent brittle-ductile transition in semiconductors in uni-axial micro-compression experiments
- 14.50 Vassiliki Gountsidou
Modeling multilayers composed of inorganic and organic materials via nanoindentation
- 15.10 Ingmar Ratschinski
Indentation-induced dislocations and cracks in (0001) GaN

15.30 TEA

Session 4: Devices

- 16.00 Oleg Vyvenko
Dislocation network in the space charge region of Schottky-diode in silicon: Electrical levels and cathodoluminescence
- 16.25 Oleg Vyvenko
Giant Poole-Frenkel effect for the shallow dislocation-related hole traps in silicon
- 16.50 Isabella Mica
Crystal defects and doping profiles in shallow p^+/n junctions
- 17.10 Marek Skowronski
Correlation of charge and leakage current induced by threading edge and screw dislocations in 4H-SiC

Posters

Dinner

17.30

Posters

18.30

20.00

Tuesday 21st September

Session 5: Defects and Diffusion

- 9.00** Nick Cowern
Defects and diffusion in Ge - a comparison with Si
- 9.50** Efterpi Kalesaki
Indium adsorption and incorporation on polar AlN
- 10.10** Amy Gandy
A transmission electron microscopy study of fluorine implantation induced damage in silicon

10.30

COFFEE

Session 6: III-N and II-VI

- 11.00** George Dimitrakopoulos
Interfacial sources of extended defects in nonpolar and semipolar III-nitride heteroepitaxy
- 12.00** Eugene Yakimov
EBIC investigation of InGaN/GaN multiple quantum well structures irradiated with low energy electrons
- 12.20** Horst Strunk
PhotoLuminescence from Al_xIn_{1-x}N layers doped with Tb³⁺ ions
- 12.40** Toby Young
A qualitative semi-classical treatment of an isolated semi-polar quantum dot

13.00

LUNCH

Session 7: Nanostructures and Quantum Dots

- 14.00** Rob Hull
Use of controlled surface defects to engineer assembly of epitaxial semiconductor nanostructures
- 14.50** Rada Savkina
Infrared radiation detection by a piezoelectric heterostructure at room temperature
- 15.10** Riccardo Gatti
Simulation of dislocation patterning in epitaxial Ge islands on Si(001)

15.30

TEA

- 16.00** George Dimitrakopoulos
Structural characteristics and strain state of semipolar (11-22) GaN quantum dots in AlN matrix
- 16.25** Thomas Kehagias
Morphology and interfacial structure of InGaN nanodisks grown in GaN nanorods
- 16.50** Uschi Bangert
Er-environments in Er-silicon/silica light emitting nanostructures
- 17.10** Bo Yang
Green's function-based multiscale modeling of lattice defects in Si-Ge multilayer heterostructures

17.30

Free evening

Wednesday 22nd September

Session 8: Interfaces and Grain Boundaries 1

9.00 Manfred Reiche

Structure and properties of dislocations in interfaces of bonded silicon wafers

9.50 Francesca Boioli

Dislocation engineering in SiGe heteroepitaxial film on patterned Si (001) substrates

10.10 Edward Steinman

Extended defect luminescence of polycrystalline SiC films grown by vapor phase reaction

10.30

COFFEE

Session 9: Optical

11.00 Ichiro Yonenaga

The susceptibility of optical properties of GaN and ZnO to fresh dislocations

12.00 Edward Steinman

Radiation properties of dislocations created by plastic deformation of Si under high pressure and low temperature

12.20 Tzanimir Arguirov

Room temperature luminescence from germanium

12.40

EARLY LUNCH

13.30

CONFERENCE OUTING.

Arundel Castle, Arundel

18.00

Reception and special lecture

Wiston House, Steyning

(tennis and croquet possible if weather permits)

20.00

Dinner, Wiston House

22.30

Coaches back to University

Thursday 23rd September

Session 10: Interfaces and Grain Boundaries 2

- 9.00** Jun Chen (Tsukuba)
Electrical, optical and mechanical properties of GBs in mc-Si
- 9.50** Jany Thibault-Penisson
Measurement of the strain field induced by a periodic distribution of dislocations superimposed to a $\Sigma=9$ grain boundary in Si

10.10 Discussion

10.30

COFFEE

Session 11: Diamond

- 11.00** Bob Jones
Point and Extended defects in brown and nano-crystalline diamonds
- 12.00** Iain Godfrey
Imaging vacancy clusters in natural diamond using aberration corrected high angle annular dark field and bright field scanning transmission electron microscopy
- 12.20** Jacques Rabier
Dislocation dipole annihilation in diamond and silicon
- 12.40** Nick Davies
Effect of off-axis growth on dislocations in CVD diamond grown on {001} substrates

13.00

LUNCH

Session 12: Graphite

- 14.00** Bo Yang
Nanoscale continuum calculation of basal dislocation core structures in graphite
- 14.50** James Boone
The Ruck and Tuck defect in graphite
- 15.10** Jean-Jo Adjizian
Extended Sulfur Defects in Graphite – effects on electrical properties and graphitisation

15.30

TEA

Session 13: the Jones zone

- 16.00** Patrick Briddon
Extended defects from first principles with AIMPRO
- 16.30** Jonathan Goss
Self-interstitial precipitates in group-IV materials: the application of high speed DFT simulations
- 16.50** Alexandra Carvalho
Stages of oxygen aggregation in germanium
- 17.10** Simon Krausel/Ben Hourahine
Global optimisation of dislocation core structures in InN
- 17.30** Chris Ewels
Progress in nanotube-related extended defects
- 17.50** Alexander Blumenau
Atomistic modelling of dislocations in semiconductors
- 18.10** Discussion and posters

19.30

Conference dinner

Friday 24th September

Session 14: III-V Semiconductors

9.00 Michelle Moram

Dislocation movement in the III-nitrides

9.50 Darius Chrobak

Nanoindentation of semiconductors: experiment and atomistic simulations

10.40

COFFEE

Session 15: Implantation

11.10 Heidi Nordmark

H-initiated extended defects from plasma treatment: Comparison between c-Si and mc-Si

12.00 Jean-François Barbot

Propagation and interactions of cracks in Si induced by H supply into He-filled cracks

12.20 Gabrielle Regula

Getter of Au by He-implantation-induced defects in 4H-SiC epitaxial layers

12.40 Lee Chow

Microstructure and magnetism of silicon co-implanted with manganese and carbon ions

13.00

LUNCH

Departure