

Sunday 14th September

- 15:00** Registration
- 17:30** Opening
- 17:50** Armin Feist, Reiner Bormann, Jakob Schauss, Jan-Gregor Gatzmann, Nara Rubiano da Silva, Stefanie Strauch, **Sascha Schäfer**, Claus Ropers (**I01**)
Ultrafast transmission electron microscopy with nanoscopic electron sources
- 18:30** Welcome Reception

Monday 15th September**Session 1: Energy conversion and storage**Chairperson:

- 08:30** Hannu Laine, Ville Vähänissi, Jasmin Hofstetter, Ashley E. Morishige, Antti Haarahiltunen, David P. Fenning and **Hele Savin** (**I02**)
The size distribution of iron precipitates in phosphorous-implanted emitters
- 09:20** **C.A. Volkert**, T. Wuttke, B. Roos, C. Nowak, and V. Roddatis (O01)
In-Situ TEM Observation of Planar Defects Prior to Amorphisation of Si by Electrochemical Lithiation
- 09:45** **Volker Naumann**, Dominik Lausch, Angelika Hähnel, Otwin Breitenstein and Christian Hagendorf (O02)
2D-Extended Defects in Silicon cause shunting of Si-Solar Cells

10:10**Coffee Break****Session 2: Strain and Strain Relaxation**Chairperson:

- 10:40** **Thomas Kehagias** (**I03**)
Resolving Structure and Strain Issues in Simple and Complex III-Nitride Nanowires
- 11:30** **R. Hull**, Dustin Andersen and Hamed Parvaneh (O03)
Inverse Simulation of Misfit Dislocation Network Formation
- 11:55** **P. Pirouz**, A. Sehirlioglu (O04)
Surface Cracking as a Relaxation Mode in Strained Heteroepitaxial Films
- 12:20** **M. Reiche**, M. Kittler, E. Pippel, W. Erfurth, A. Haehnel, and H. Uebensee (O05)
Strain and Carrier Transport along Dislocations
- 12:50**

Lunch

Session 3: Atomic Structure of extended defects

Chairperson:

- 14:30** **Talid Sinno (I04)**
Inherent landscape analysis of defect microstructure in crystalline materials
- 15:20** **H. Yang**, Juan G Lozano, Timothy J Pennycook, Peter B Hirsch and Peter D Nellist (O06)
STEM Optical Sectioning for Imaging Screw Displacements in Dislocation Core Structures
- 15:45** **C.D. Latham**, P. J. L. Young, T. P. Trevetha, M. I. Heggi, M. J. Rayso, P. R. Briddon (O07)
An ab initio Investigation into Dislocation Structures in Graphite
- 16:10** **J. Vanhellemont**, S. Anada, T. Nagase, H. Yasuda, A. Schulze, H. Bender, R. Rooyackers and A. Vandooren (O08)
On the Impact of Dopants and Si Structure Dimensions on {113}-defect Formation during In-situ 2 MeV Electron-irradiation in an UHVEM
- 16:35** **Break**
- 17:00** **Poster session I**

Chairperson:

Tuesday 16th September

Session 4: Doping, Implantation, Irradiation

Chairperson:

- 08:30** **Esidor Ntsoenzok**, Carole Braley, Sylvia Pokam, Frédéric Mazen (I05)
10-100 μ m ultra-thin substrates produced by MeV hydrogen implantation in Si: fundamentals and applications
- 09:20** **Jean-Francois Barbot**, M. Vallet, E. Oliviero and M.F. Beaufort (O09)
In situ evolution of helium bubbles in 4H-SiC under irradiation
- 09:45** A. B Smirnov, V.P. Kladko, A.A. Korchovyi, **R.K. Savkina**, F.F. Sizov, R.S. Udovitska (O10)
Nanoscale Pattern Formation On The Surface Of HgCdTe Produced By Ion Bombardment

10:10

Coffee Break

Session 5: Dislocations I

Chairperson:

- 10:40** **Maxim Trushin**, O. Vyvenko (I06)
Enhancement of the Carrier Thermoemission From the Electronic States at Dislocation Core Due to Attractive Deformation Potential

- 11:30** O.V. Feklisova, V.I. Orlov and **E.B. Yakimov (O11)**
EBIC and LBIC investigations of dislocation trails in Si
- 11:55** **Vitaly Kveder**, Maria Khorosheva and Michael Seibt (O12)
On the Nature of Point Defects Generated by Motion of Dislocations in Si
- 12:20** **D. Jameel**, J. F. Felix, M. Aziz, N. Al Saqri, D Taylor, and M. Henini (O13)
Investigation of Defects in Polyaniline (PANI) Grown on High Index GaAs Planes Using Current-Voltage, Conductance and Deep Level Transient Spectroscopy (DLTS)

12:50**Lunch****Session 6: Mechanical**Chairperson:

- 14:30** **Julien Godet**, Firas Abed El Nabi, J. Guénolé, Sandrine Brochard, and L. Pizzagalli (**I07**)
Atomistic approach of the brittle ductile transition in silicon at low dimensions through the understanding of dislocation and crack nucleation mechanism
- 15:20** **I. Yonenaga**, Y. Imoto, , Y. Ohno, K. Kutsukake and M. Deura (O14)
Dislocation Mobilities in Ductile to Brittle Temperature Region in Si
- 15:45** S. Würzner, Rajko Buchwald, **Hans Joachim Möller (O15)**
Surface damage and mechanical stability of silicon wafers
- 16:10** **J. Rabier**, F. Pailloux and L. Pizzagalli (O16)
On the Dislocation Core Structures Associated to Point Defect Clusters and Micro Crack Formation in Diamond and Silicon

16:35**Break****17:00****Poster session II**Chairperson:**Wednesday 17th September****Session 7: Advanced Characterization**

- 08:30** **C. Trager-Cowan**, G. Naresh-Kumar, N. Allehiani, S. Kraeusel, B. Hourahine, S. Vespucci, D. Thomson, J. Bruckbauer, G. Kusch, P. R. Edwards, R. W. Martin, A. P. Day, A. Winkermann, A. Vilalta-Clemente, A. J. Wilkinson (**I08**)
Electron Channelling Contrast Imaging of Extended Defects in III-Nitride Semiconductors

09:20 Amina Tandjaoui, Th  cle Rib  ri-B  ridot, Nathalie Mangelinck-No  l, Guillaume Reinhart, **Gabrielle Regula**, Tamzin Lafford, Jos   Baruchel (O17)
In Situ and Real-Time Combination of X-Ray Radiography and Topography Towards Mastering of Si Growth

09:45 Alexander Senichev, Vadim Talalaev, Igor V. Shtrom, Horst Blumtritt, George Cirlin, Christoph Lienau, **Peter Werner** (O18)
Correlated Nanospectroscopic Imaging and Structural Analysis of Individual Beryllium-doped GaAs/AlGaAs Core-Shell Nanowires

10:10

Coffee Break

Session 8: Grain boundaries and interfaces

Chairperson:

10:40 **Takashi Sekiguchi**, Karolin Jiptner, Ronit R. Prakash, Jun Chen, Yoshiji Miyamura, Hirofumi Harada and Koichi Kakimoto (I09)
Control of extended defects in cast and seed cast Si ingots for photovoltaic application

11:30 **E. Hieckmann**, M. Nacke, M. Allardt, Y. Bodrov, P. Chekhonin and J. Weber (O19)
Optical Behaviour, Electrical Activity and Residual Strains of Grain Boundaries in Silicon

11:55 **Y. Ohno**, K. Inoue, K. Kutsukake, M. Deura, I. Yonenaga, N. Ebisawa, H. Takamizawa, Y. Shimizu, K. Inoue, Y. Nagai, H. Yoshida, S. Takeda, S. Tanaka, M. Kohyama (O20)
Interactions of impurity atoms with $\Sigma 3\{111\}$ and $\Sigma 9\{114\}$ grain boundaries in silicon

Lunch

Afternoon: Excursion

Thursday 18th September

Session 9: Dislocations II

Chairperson:

08:30 Benjamin Butz, Christian Dolle, Florian Niekiel, Konstantin Weber, Daniel Waldmann, Bernd Meyer, Heiko B. Weber and **Erdmann Spiecker** (I10)
Dislocations in Bilayer Graphene - Materials Science meets Physics

09:20 Daniel Oriwol, **Hartmut S. Leipner**, Andreas N. Danilewsky, Lamine Sylla, Winfried Seifert, Martin Kittler, Jan Bauer (O25)
Dislocation Cluster Formation in Multicrystalline Silicon

09:45 **A. Loshachenko**, O. Vyvenko, N. Vysotskii and O. Kononchuk (O22)
Low Temperature Kinetics of Hydrogen Interaction with Dislocations in Silicon

10:10

Coffee Break

Session 10: Defect Dynamics

Chairperson:

- 10:40** **A.I. Kirkland**, J Warner, A Robertson and C Allen (**I11**)
Structural Studies of Defects and Defect Dynamics in Graphene
- 11:30** **I. Yonenaga** (O23)
Twin Formation during Czochralski-growth of Si and SiGe
- 11:55** I. Ratschinski, **H. S. Leipner**, N. Wüst, G. Leibiger and F. Habel (O24)
Motion of dislocations in freestanding (0001) GaN single crystals
- 12:20** **Moumita Ghosh**, G Mohan Rao and Michael Seibt (O25)
Can undoped ZnO nanorod be ultrahigh-piezoelectric?

12:50

Lunch

Session 11: Nanostructures

Chairperson:

- 14:30** **F. Panciera**, Y.-C. Chou, M. C. Reuter, K. Hoummada, D. Zakharov, E. A. Stach, D. Mangelinck, S. Hofmann and F. M. Ross (**I12**)
Nanoscale investigation of metal-semiconductor thin films and nano-structures
- 15:20** Stefania Carapezzi, Alessia Irrera, Vladimir Sivakov and **Anna Cavallini** (O26)
Impact of Processing Conditions on the Level Scheme of Silicon Nanowires Synthesized by Top-Down Techniques
- 15:45** A. Lotsari, G.P. Dimitrakopoulos, Th. Kehagias, A. Adikimenakis, **Ph. Komninou** and A. Georgakilas (O27)
Structural Analysis of Inclined GaN Nanowires by TEM Techniques
- 16:10** **Miao Yang**, Nicolas A. Mayer and Horst P. Strunk (O28)
Resonant excitation of Tm luminescence via quantum dots formed by spinodal decomposition in $Al_xIn_{1-x}N$ layers

Conference Dinner

Friday 19th September

Session 12: Group III nitrides

Chairperson:

08:30 **Daniel Alquier**, S. Kone, M. Portail, G. Gomme, M. Lamhamdi, W. Khalfaoui, G. Gautier, G. El Zammar, T. Oheix, A. Yvon, J. Ladroue, E. Collard, Y. Cordier and F. Cayrel **(I13)**
Growth and process induced defects in GaN : effects on power devices

09:20 **J. Kioseoglou**, T. Pavludis, G. P. Dimitrakopoulos, Th. Karakostas (O29)
Structural Reconstructions of $In_xGa_{1-x}N$ Alloys

09:45 **Imad Belabbas**, Jun Chen and Gérard Nouet (O30)
Electronic structure of threading dislocations in wurtzite GaN

10:10

Coffee Break

Session 13: Opto-electronic properties

Chairperson:

10:40 **John Moseley**, Stuart Farrell, Harvey L. Guthrey, Wyatt K. Metzger, Richard K. Ahrenkiel, Mowafak M. Al-Jassim (O31)
Investigation of Structural Defect Related Luminescence in CdTe with Low- Temperature Cathodoluminescence Spectrum Imaging

11:05 **M.K. Shakfa**, M. Wiemer, P. Ludewig, K. Jandieri, K. Volz, W. Stolz, S. D. Baranovskii, and M. Koch (O32)
Two-energy-scale model for the description of the thermal quenching of the photoluminescence in disordered GaAsBi

11:30 **Daniela Cavalcoli**, B.Fraboni, G. Impellizzeri, L. Romano, E.Scavetta , M. G. Grimaldi (O33)
Quantum confinement and light trapping effects in nanoporous Ge

11:55 **Martin Kittler**, T. Arguirov, M. Reiche, C. Krause and D. Mankovics (O34)
About dislocation and oxygen related luminescence of silicon around 0.8 eV

12:20

Closing remarks and farewell lunch