Semiconductor and Integrated Opto-Electronics Conference

Cardiff University

31st March - 2nd April 2026

South Wales Compound Semiconductor Place Based Impact Acceleration Account

IOP Institute of Physics Semiconductor Physics Group

Lambda

Cardiff University Prifysgol Caerdydd — Institute for Compound Semiconductors

Sefydliad ar gyfer Lled-ddargludyddion Cyfansawdd

inseto KLA OXFORD INSTRUMENTS BRUKER Photon Design

hv photonics an Open Access Journal by MDPI

UKNIBC UK NATIONAL ION BEAM CENTRE

CS connected

TF FAB SPUTTERING FACILITY

PI-KEM

Kurt J. Lesker Company

A-GAS Electronic Materials TOGETHER WE CAN

NESCA NORTH EAST SPACE COMMUNICATIONS ACCELERATOR

CS Hub

Compound Semiconductor Centre

Conference Locations

Location: Centre for Student Life
Address: Park Place, Cathays, Cardiff, CF10 3BB

Parking: On-street pay and display at Park Place and on Museum Avenue (we cannot reimburse costs)
Registration Location: Centre for Student life, 3rd floor
Oral Presentations: Sir Stanley Thomas Lecture Theatre, 2nd and 3rd floor
Refreshment Location: Centre for Student life, 3rd floor

Commemorative Talks: Sbarc|Spark
Address: Maindy Road, Cardiff, CF24 4HQ

Welcome Drinks and Poster Session : Translational Research Hub
Address: Maindy Road, Cardiff, Wales, UK, CF24 4HQ

Banquet location: Cornerstone
Address: Charles Street, CF10 2SF

Programme

Tuesday 31st March

12.00	Registration and light lunch 3rd floor, Centre for Student Life
14.00	Session 1: Epitaxial Growth Sir Stanley Thomas Lecture Theatre, Centre for Student Life
15.45	Refreshment Break 3rd floor, Centre for Student Life
16.30	Session 2: Commemorative Talks Event Space, Sbarc| Spark
17.30	Session 3: Poster Session Translational Research Hub
17.30 onwards	Welcome Drinks Reception with Buffet Translational Research Hub - Sponsored by Compound Semiconductor Centre and Photon Design

Wednesday 1st April

09.00	Session 4: Modelling and Design Sir Stanley Thomas Lecture Theatre, Centre for Student Life
10.30	Refreshment Break 3rd floor, Centre for Student Life
11.00	Session 5: Fabrication and Characterisation Sir Stanley Thomas Lecture Theatre, Centre for Student Life
12.45 - 13.45	Lunch and Exhibition 3rd floor, Centre for Student Life
13.45	Session 6: Enhanced Functional Devices Sir Stanley Thomas Lecture Theatre, Centre for Student Life
15.30	Refreshment Break 3rd floor, Centre for Student Life
16.00	Session 7: Open Innovation in Sustainable Optoelectronics 3rd floor, Centre for Student Life
18.15	Banquet Drinks Reception Cornerstone, Charles Street
19.15 Onwards	Conference Banquet Cornerstone, Charles Street

Thursday 2nd April

09.00	Session 8: Optoelectronics Sir Stanley Thomas Lecture Theatre, Centre for Student Life
10.00	Refreshment Break 3rd floor, Centre for Student Life
11.00	Session 9: Integration Sir Stanley Thomas Lecture Theatre, Centre for Student Life
12.30	Lunch 3rd floor, Centre for Student Life

Conference Close

Programme, Tuesday 31st March

12.00 Onwards - Registration and light lunch

3rd floor, Centre for Student Life

Session 1: Epitaxial Growth

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

14.00 S26_24 **Mechanisms for reconstruction-dependent growth processes in GaAsBi**

Douglas Crackett[1], Dominic Sterland[2], Gavin Bell[2], Robert D. Richards[1]*

[1.]School of Electrical and Electronic Engineering, The University of Sheffield, [2.] Department of Physics, The University of Warwick

14.15 S26_05 **AI-assisted determination of GaN growth type from real time RHEED analysis**

F. Bastiman[1], J. Kang[2], M.I. Lorente[1], R. Engel-Herbert[2]

[1] Bizmuth MBE Ltd, London, UK, [2] Paul Drude Institute, Berlin, Germany

14.30 S26_21 **In-Situ Optical Metrology for Optoelectronic Devices grown by MOCVD**

F. Weigert[1*], K. Haberland[1], J. Zettler[1], C. Lörchner-Gerdaus[1]

[1.]School of Electrical and Electronic Engineering, The University of Sheffield, [2.] Department of Physics, The University of Warwick

14.45 S26_25 **Surface Mediated Self-Regulation in GaAsBi MBE Growth**

Heather L. Jacobs, Douglas Crackett, Rebecca Boston, Robert D. Richards

The University of Sheffield

15.00 S26_13 **Al-Mediated Crystal Phase Evolution in AlGaAs Nanowires**

Ziyue Yin,[1] Haotian Zeng,[1] Giorgos Boras,[1] Raghavendra R Juluri,[2] Francisco Alvarado,[2] Huiwen Deng,[1]Hui Jia[1] Chong Chen[1] Yutong Zhang,[1] Anton Velychko,[4] Fahad Alghamdi,[1] Mingchu Tang,[1] David Mowbray,[4] Patrick Parkinson,[3] Ana M Sanchez,[2] and Huiyun Liu[1]

[1]Dept. of Electronic and Electrical Eng., University College London, London WC1E 7JE, United Kingdom, [2]Dept. of Physics, University of Warwick, Coventry CV4 7AL, United Kingdom, [3]Dept. of Physics and Astronomy, The University of Manchester, M13 9PL, United Kingdom[4] Dept. of Physics and Astronomy, The University of Sheffield, Sheffield S3 7RH, United Kingdom

15.15 S26_03 **Tunnel Epitaxy of III-V Membranes on SOI for Photonic Integration**

Zhao Yan[1], Yifu Chen[2], Martin Ebert[2], Ka Ming Wong[1], Wenjie Wang[2], Tim Grieb[3], Florian F. Krause[3], Andreas Rosenauer[3], Graham T. Reed[2], David J. Thomson[2], and Qiang Li[1*]

[1] School of Physics and Astronomy, Cardiff University, Cardiff CF24 3AA, UK, [2] Optoelectronics Research Centre, University of Southampton, Southampton SO17 1BJ, UK, [3] Institute of Solid State Physics, University of Bremen, 28359 Bremen, Germany

15.30 S26_35 **State-of-the-art triple-chamber new MBE system at the National Epitaxy Facility**

Z.K. Bishop[1*], E. Clarke[1], E.M. Sala[1], P. Fry[1], R.A. Oliver[2], H. Liu[3], M.S. Skolnick[4], and J. Heffernan[1]

[1]School of Electronic and Electrical Engineering, University of Sheffield, [2]Department of Materials Science and Metallurgy, University of Cambridge, [3]Department of Electronic and Electrical Engineering, University College London, [4]School of Mathematical and Physical Sciences, University of Sheffield

15.45 Refreshments

3rd floor, Centre for Student Life

16.10 - Walk to Sbarc|Spark

Session 2: Commemorative Talks

Event space, Sbarc| Spark, Maindy Road

16.30 S26_40 **An All-Electrical Non-Destructive Approach to VCSEL Lateral Oxidation Characterisation**

C. P. Allford[1], J. Baker[1], S. J. Gillgrass[1], T. Peach[2], C. Hentschel[1], S. Shutts[1] and P.M. Smowton[1]

[1]School of Physics and Astronomy, Cardiff University, Cardiff, CF24 3AA, UK, [2]Institute for Compound Semiconductors, Cardiff University, Cardiff, CF24 4HQ, UK

16.45 S26_42 **Continuous-wave operation of laterally coupled distributed feedback and ridge waveguide lasers on MOCVD-grown InAs/InP quantum dot material**

Tom Simpson[1, *], Ben Salmond[1], Zhongming Cao[1], Curtis Hentschel[1], Richard Forrest[1], Shangfeng Liu[1], Qiang Li[1], Peter M. Smowton[1, 2], Samuel Shutts[1, 2]

[1.] School of Physics and Astronomy, Cardiff University, Cardiff, CF24 3AA UK. [2.]Institute for Compound Semiconductors, Cardiff University, Cardiff, CF24 4HQ, UK

17.30 Onwards - Welcome Drinks and Buffet

Translational Research Hub, Maindy Road

Sponsored by Compound Semiconductor Centre and Photon Design

Session 3: Posters

Translational Research Hub, Maindy Road

S26_39 **Optimizing the Wet Etching Method for High-Yield AlAsSb/InGaAs Avalanche Photodiode Fabrication**

Haifeng Kan[1,†], Danqi Lei[1,†,*], Xuanchang Zhang[1], Hexing Wang[1], Suguo Huo[2], Baolai Liang[3], Huiyun Liu[1], Mingchu Tang[1]

[1]Department of Electronic and Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, United Kingdom, [2]London Centre for Nanotechnology, 17-19 Gordon Street, London, WC1H 0AH, United Kingdom. [3]Department of Electrical and Computer Engineering, California NanoSystem Institute, University of California- Los Angeles, Los Angeles, CA 90095, USA

S26_46 **Enhancing Charge Extraction in Perovskite Solar Cells using an MnSe Electron Transport Layer for Enhanced Efficiency via Conduction Band Engineering**

Dhafer O. Alshahrani[1*], Farooq Muhammad Umar[2], Farooq Muhammad Sikandar[3], Kanwal Sadia[3], UlAin Qurat[4], Saad Muhammad[5]

[1]Department of Physics, College of Science, University of Bisha, P.O. Box 551, Bisha 61922, Saudi Arabia. [2]Department of Chemistry, Bahauddin Zakariya University, Multan, Punjab, Pakistan. [3]Department of Physics, University of Sahiwal, Sahiwal, Pakistan. [4] Department of Physics, University of Education, Lahore, Punjab, Pakistan. [5]Department of Electrical Engineering, COMSATS University Islamabad, Lahore Campus, Lahore, Punjab, Pakistan

Programme, Wednesday 1st April

Session 4: Modelling and Design

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

09.00 S26_01 **8 Gb/s PAM-4 secure free space optical communications using chaotic 3.7 μm interband cascade lasers**

Jiada Xu[1], Hong Han [1*], Yuting Song[1], Kun Pan[1], Zhiwei Jia[1], Jianguo Zhang [1], Mingming Huo[2], and K. Alan Shore[3]

[1]Key Laboratory of Advanced Transducers and Intelligent Control System, Ministry of Education, College of Physics and Optoelectronics, Taiyuan University of Technology, Taiyuan 030024, China, [2]Qingdao Branch, Naval Aeronautical University, Qingdao 266041, China, [3]School of Electronic Engineering, Bangor University, Wales, LL57 1UT, UK

09.15 S26_28 **Exploring the Impact of Strain on the Performance Metrics of Group-IV based lasers**

Che Watson[1,2], Aneirin Ellis[1] and Stephen J. Sweeney[1]

[1] James Watt School of Engineering, University of Glasgow, Glasgow, G12 8LT, UK, [2] School of Mathematics and Physics, Queens University Belfast, Belfast, BT7 1NN, UK

09.30 S26_07 **Strain-engineered polarization and optical loss analysis in bulk SiGeSn for mid-infrared photonics**

Walid Belaid [1,*], Vincent Reboud[2], Robert Kelsall [1], Zoran Ikonic [1]

[1] School of Electronic and Electrical Engineering, University of Leeds, LS29JT Leeds, UK. [2] CEA-Leti, Université Grenoble Alpes, F-38000 Grenoble, France

09.45 S26_32 **Controlling the linear polarization orientation of H1 photonic crystal cavity modes.**

Amit Nilabh[a]*, Wolfgang Langbein[b], Francesco Masia[a]

[a] School of Biosciences, Cardiff University, Cardiff CF10 3AT, [b] School of Physics and Astronomy, Cardiff University, Cardiff CF10 3AT

10.00 S26_11 **Modelling and characterization of Coupled Resonator Induced Absorption (CRIA) in coherently coupled micro-ring resonators (MRRs) for use in optical modulation**

M. J. Goodwin, I. F. Crowe, and T. Li

Photon Science Institute, Department of Electrical and Electronic Engineering, The University of Manchester, Manchester, United Kingdom

10.15 S26_22 **Design Approaches Towards Improved Performance in Near-Infrared Semiconductor Lasers for Heat-Assisted Magnetic Recording (HAMR) Applications**

Qixuan Chen[1,2,3*], Dominic A. Duffy[2,] Igor P. Marko[2], Aidan Goggin[3], Robert Bowman[1] and Stephen J. Sweeney[2]

[1.] School of Maths and Physics, Queen's University Belfast, Belfast, BT7 1NN, UK, [2]. James Watt School of Engineering, University of Glasgow, Glasgow, G12 8LT, UK, [3]. Seagate Technology, Derry, BT48 0BF, UK

10.30 - 11.00 - Refreshment Break

3rd floor, Centre for Student Life

Session 5: Fabrication and Characterisation

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

11.00 S26_37 **Optimised Electron Beam Lithography for Wafer-Scale 150 mm InP Laser Fabrication**

Tomas Peach, Sanna Makela, Parco Wong, Angela Sobiesierski
Institute for Compound Semiconductors (ICS), Translational Research Hub, Maindy Road, Cardiff CF24 4HQ

11.15 S26_10 **Electrical AFM for Probing Local Electronic Functionality in Semiconductor Optoelectronic Devices.**

Jiahui Qi*, Peter Dewolf and Mickael Febvre
Bruker Nano Surfaces and Metrology, Santa Barbara, CA, USA

11.30 S26_20 **Ion Beam Analysis for Characterisation of Advanced Photovoltaic Materials**

C. D. McAleese[1], V. W. Appuhamilage[2], H. Shim[3], C. Costa1, N. Sano[4], I. Jayawardena[2], J. S. Yun[2] and M. K. Sharpe[1]
[1] Surrey Ion Beam Centre, University of Surrey, Guildford, Surrey GU2 7XH, UK, [2] Advanced Technology Institute (ATI), University of Surrey, Guildford, Surrey GU2 7XH, UK, [3] Australian Centre for Advanced Photovoltaics (ACAP), School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney, NSW 2052, Australia, [4]Ionoptika Ltd., Chandler's Ford, SO53 4BZ, UK

11.45 S26_06 **A method for measuring radiative recombination time in self-assembled quantum dot laser**

Ivan B. Karomi[1] and Mohammed S. Al-Ghamd[2]
[1]Department of Physics, College of Education for Pure Science, University of Mosul, 41002, Mosul, Iraq.[2]Department of Physics, Faculty of Science, King Abdulaziz University P.O. Box 80203, Jeddah 21589, Saudi Arabia

12.00 S26_17 **Identification of mode-hopping in DFB laser diodes using delayed self-heterodyne detection**

Saffron Tyler[1,*] and Bruce Saleeb-Mousa[1]

[1]Lumentum Technologies UK, Caswell Science and Technology Park, Towcester, NN12 8EQ

12.15 S26_34 **Uniformity of 1300 nm InAs Quantum Dot Lasers grown on 150 mm GaAs substrates**

Andrew R Smith[1*], Craig P Allford[1], Sara-Jayne Gillgrass[1], George M Jandu[1], J Iwan Davies[2], Andrew Clark[3], Peter M Smowton[1]

[1]Cardiff University, The Parade, Cardiff CF24 3AA, United Kingdom, [2]IQE plc, Pascal Close, St Mellons, Cardiff CF3 0LW, United Kingdom, [3] IQE Inc, NC, Gallimore Dairy Road, Greensboro, NC 27409, USA

12.30 S26_45 **Optimisation of plasma etching on 150 mm indium phosphide wafers**

Tom Simpson[1], Jay Burnett[2], Adam Beachey[2], Jacob Mitchell[2], Kerry Roberts[2], J. Iwan Davies[3], Huma Ashraf[2], Samuel Shutts[1, 4]

[1]School of Physics and Astronomy, Cardiff University, Cardiff, CF24 3AA, UK. [2.] KLA Corporation (SPTS Division), Celtic Lakes, Newport NP10 8BE, UK.[3]IQE plc. St Mellons, Cardiff, CF3 0LW, UK,[4.] Institute for Compound Semiconductors, Cardiff University, Cardiff, CF24 3AA UK

12.45 - 13.45 Lunch and Exhibition

3rd floor, Centre for Student Life

Session 6: Enhanced Functional Devices

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

13.45 S26_41 **Laterally coupled DFB lasers on a 150 mm InP platform**

B. Salmond[1], T. Simpson[1], T. Peach[2], R. Forrest[1], P. Cornish[3], W. Meredith[3], P. M. Smowton[1,2], S. Shutts[1,2]

[1]School of Physics and Astronomy, Cardiff University, Cardiff CF24 3AA, [2]Institute for Compound Semiconductors (ICS), Translational Research Hub, Maindy Road, Cardiff CF24 4HQ, [3]Compound Semiconductor Centre Ltd, St Mellons, Cardiff CF3 0LW

14.00 S26_29 **Direction and polarization control of light emission from GaN LEDs-coupled polarization-dependent metalens**

Thi Huong Ngo*, Van Doan Le, Pierre-Marie Coulon, Sébastien Chenot, Benjamin Damilano, Rémi Colom, Samira Khadir

Université Côte d'Azur, CNRS, CRHEA, Valbonne, France

14.15 S26_15 **Inkjet Printed Colloidal Quantum Dot LED Emitters for Visible Light Communication**

Sri Datta Aneesh Chodavarapu[a]*, Chandra Kant[a], Benxuan Li[b] and Bo Hou[a],*

[a]School of Physics and Astronomy, Cardiff University, Cardiff, CF24 3AA, United Kingdom. [b] Nanoglow ltd, Cambridge, United Kingdom

14.30 S26_27 **Monolithically Integrated 1.3 µm InGaAsN Laser Diodes on Silicon**

Patrik Rajala, Riku Isoaho, Jukka Viheriälä, Heikki Virtanen, Mircea Guina

Tampere University, Optoelectronics Research Centre, Korkeakoulunkatu 3, 33720 Tampere, Finland

14.45 S26_44 **Asymmetric Tapers for Multimode Interference Reflector Lasers**

George M. Jandu[1*], Andrew. R. Smith[1], Sara-Jayne Gillgrass[1], Peter M. Smowton[1]

[1]Cardiff University, School of Physics & Astronomy, The Parade, Cardiff CF24 3AA, United Kingdom

15.00 S26_09 **Short-cavity InAs/GaAs Quantum-Dot Lasers with 25-nm GaAs Spacers**

Hexing Wang,[1] Huiwen Deng,[1] Jae-Seong Park,[1] Xuanchang Zhang,[1] Cong Lu,[2] Haifeng Kan,[1] Haotian Zeng,[1] Yangqian Wang,[1] Dominic Gallagher,[3] Junhao Liu,[1] Danqi Lei,[1] Hui Jia,[1] Wei Li,[2,] Peter M. Smowton,[4] Siming Chen,[1] Alwyn Seeds,[1] Huiyun Liu,[1] Mingchu Tang[1]

[1] Department of Electronic and Electrical Engineering, University College London, Torrington Place, WC1E 7JE, United Kingdom. [2] College of Materials Science and Engineering, Beijing University of Technology, Beijing 100124, People's Republic of China. [3] Photon Design, Oxford, United Kingdom. [4]School of Physics and Astronomy, Cardiff University, The Parade, Cardiff CF24 3AA, United Kingdom

15.15 S26_12 **Neuron Surface Emitting Laser (NeuronSEL): A Multi-junction VCSEL for Neuromorphic Photonic Technologies**

Maria Duque-Gijon,[1],* Joshua Robertson,[1],* Jack Baker[2], Xavier Porte[1], Samuel Shutts[2], Peter M. Smowton[2], Antonio Hurtado[1]

[1]Institute of Photonics, SUPA, Department of Physics, University of Strathclyde, 16 Richmond St, Glasgow G1 1XQ, UK. [2]Compound Semiconductor Technology Group, Cardiff University, Translational Research Hub, Cardiff CF24 4HQ, Wales, UK

15.45 - 17.45 Session 6: Open Innovation in Sustainable Optoelectronics - Refreshments to be served
3rd floor, Centre for Student Life

18.15 Banquet Drinks Reception
Cornerstone, Charles Street

19.15 Onwards Conference Banquet
Cornerstone, Charles Street

Programme, Thursday 2nd April

Session 8: Optoelectronics

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

09.00 S26_08 **Post-growth Site-Selective Engineering of Epitaxial Quantum Dots by Focused Ion Beam Implantation**

Mehdi Ahmadian[1,2*], Young In Na[3], Maddison Coke[1], Daniel Blight[1], Akshay K Verma[3], Ian Farrer[3], Jon Heffernan[3], Richard J Curry[1]

[1]*Photon Science Institute (PSI), Department of Electrical & Electronic Engineering, University of Manchester, Manchester, UK.* [2] *EPSRC Centre for Doctoral Training (CDT) in Compound Semiconductor Manufacturing, Cardiff University, Cardiff, UK.* [3]*National Epitaxy Facility (NEF), Nanoscience and Technology Centre, University of Sheffield, Sheffield, UK*

09.15 S26_30 **Antimony-Based Alloys for APD Operation in the e-SWIR**

L. R. Gilder, A. P. Craig and A.R. J. Marshall

Department of Physics, Lancaster University, Lancaster, LA1 4YB

09.30 S26_36 **On-Chip InAs Quantum Dot DFB Laser for Photonic Integration**

F. Albeladi[1], D. Qiao[2], S. Gillgrass[2], N. Albittar[2], S. Power[2], C. P. Allford[2] and P. M. Smowton[2]

[1]*Department of Physical Sciences, College of Science, University of Jeddah, Jeddah, Saudi Arabia..*[2]*School of Physics and Astronomy, Cardiff University, UK.*

09.45 S26_33 **The use of additive and subtractive manufacturing on Photonic Crystal Surface Emitting Laser to encode orbital angular momentum states for quantum communications**

Gerardo Villarreal Garcia[1], Petros Androvitsaneas[2*], James McDougall[2], Richard J.E. Taylor[2,3], Andrew Young[2], Ruth Oulton[2],
[1]Compound Semiconductor Applications Catapult, Imperial Park, Innovation Centre, Celtic Way, Newport NP10 8BE, UK. [2]Quantum Engineering Technology Labs, H. H. Wills Physics Laboratory and School of Electrical, Electronic, and Mechanical Engineering, University of Bristol, Bristol, UK. [3]Vector Photonics Limited, Building 4.05, West of Scotland Science Park, Kelvin Campus, 2317 Maryhill Rd, Glasgow, G20 0SP, United Kingdom

10.00 S25_38 **Semiconductors for Space-based applications**

Stephen Campbell[1], Prabeesh Punathil[1], Nicholas Theodorou[1], Dan Lamb[2], Hamdi Torun[1], Guillaume Zoppi[1], Vincent Barrioz[1]
[1]School of Engineering, Physics and Mathematics, Northumbria University, Newcastle upon Tyne, U.K. [2]Centre for Integrative Semiconductor Materials (CISM) Swansea University Bay Campus, Fabian Way, Swansea SA1 8EN

10.15 S26_31 **Resonant cavity enhanced photodetectors for miniaturised e-SWIR spectroscopy**

J.E Fletcher[1], E.W.H Lau[1], J.A Bunyan[1] F. J. Castaño[2], and A.R.J Marshall[1]
[1] Physics Department, Lancaster University, Lancaster, United Kingdom, LA1 4YB. [2] Technology R&D department, ams OSRAM AG, Tobelbader Strasse 30, 8141 Premstätten Austria

10.30 - 11.00 - Refreshment Break

3rd floor, Centre for Student Life

Session 9: Integration

Sir Stanley Thomas Lecture Theatre, Centre for Student Life

11.00 S26_14 **Hybrid Chiplet-Based Opto-Electronic Integration on SiON/Si Interposer for Co-Packaged Optical I/Os**

Daibao Hou [1,2], Yuntian Yao [1,2] , Xiaotian Cheng [1,2] , Shuning Ding [1,2],Qiyou Wu [1,2], Yonghong Hu [3], Wei Pan [3], Chao Huang [3] , Huihui Zhu [1,2], Yongzhen Huang [4], Chenghui Li [1,2] and Chaoyuan Jin [1,2,5,*]

[1] State Key Laboratory of Silicon and Advanced Semiconductor Materials & College of Information Science and Electronic Engineering, Zhejiang University, Hangzhou 310027, China. [2] ZJU-Hangzhou Global Scientific and Technological Innovation Center, Zhejiang University,Hangzhou 311200, China. [3] Zhejiang Laychip Optoelectronics Technology Co., Ltd, Taizhou 317500, China. [4] Institute of Semiconductors, Chinese Academy of Sciences, Beijing 100083, China. [5] College of Integrated Circuits, Zhejiang University, Hangzhou 311200, China

11.15 S26_04 **Monolithically Integrated InGaAs/AlGaAs/GaAs 2DEG Hall Effect Circuits**

Christopher Walsh[1], Mohammadreza Sadeghi[2] and Mohamed Missous[1,2]

[1]Department of Electrical & Electronic Engineering, The University of Manchester Manchester, M13 9PL, United Kingdom. [2]Advanced Hall Sensors Ltd., Manchester, M17 1RW, United Kingdom

11.30 S26_26 **Reconfiguration-Aware Optical Circuit Switching for Distributed Training**

Fangxiao Dong[1,2], Aakash Patel[3], Robert Kleijnen[3], Tongyun Li[1], James Myers[2], Richard Penty[1], and Qixiang Cheng[1,*]

(1) Department of Engineering, University of Cambridge, Cambridge CB3 0FA, UK; (2) IMEC, 20 Station Road, Cambridge CB1 2JD, UK; (3) IMEC, 3001 Leuven, Belgium

11.45 S26_23 **A Foundry-Ready Silicon Nitride PDK**
Thomas Parker, David Payne, Eli Ayi-Yovo and Ning Zhang
CSA Catapult, Future Telecoms Hub, Bristol and Bath Science Park, Bristol BS16 7FR.

12.00 S26_19 **An electro-optic co-design simulation framework for quantum-dot modulators in high-speed integrated photonic systems**
Liv Hawkins[1,2,] Solomon McKiernan[1,2], Michael Wale[1,*]
[1]University College London, UK. [2]University of Cambridge, UK

12.15 S26_16 **High-Fidelity MZI Optical Switch Fabric**
Richard J Zhang[(1)], Peng Bao[(1)], Chenxi Tan[(1)], Alan Yilun Yuan[(1)], Seb Savory[(1)], Richard Penty[(1)], and Qixiang Cheng[(1)],*
[(1)] Department of Engineering, University of Cambridge, Cambridge CB3 0FA, UK

12.30 - 13.30 Lunch
3rd floor, Centre for Student Life

Conference Closes