Homepage of Dr. Stephen Daniels

Contents

Biographical Information

Stephen is Executive Director of the National Centre for Plasma Science and Technology (www.ncpst.ie) and a Lecturer in the School of Electronic Engineering at Dublin City University. He leads a multidisciplinary research team in plasma technology and energy systems. He is Director of the Energy & Design Laboratory (energylab.eeng.dcu.ie) and the nanomaterials processing laboratory (www.eeng.dcu.ie/~npl).

Stephen is a Principal Investigator in the Science Foundation Ireland Funded 'Precision' Strategic Research Cluster (www.ncpst.ie/precision), an academic member of the Biomedical Diagnostics Institute (www.bdi.ie), and a Principal Investigator at the MESTECH Marine and Environmental Sensing Hub (http://dcu.ie/ncsr/Beaufort)

Stephen holds a B.Eng in Electronic Engineering from DCU and a PhD from DCU earned while studying abroad at IMEC, Belgium and Philips Research, The Netherlands. He spent 8 years with Applied Materials, where he held a number of senior positions including Metallisation Technologist for Northern Europe and Global Cluster Team Manager. Following this he spent 3 years with Scientific Systems Ltd as Head of Research and Development, developing and marketing their flagship plasma process control product. He spent 1 year at University College Dublin as Manager of the Centre for Materials Processing. In March 2004, he joined the School of Electronic Engineering, DCU as a Lecturer and in July 2005 was appointed Executive Director of the National Centre for Plasma Science and Technology.

His primary scientific technical competence is in the area of plasma processing for integrated circuit manufacturing, thin film deposition techniques. He also has extensive experience in team management, and product design and development. He has spent time working at Philips Research, IMEC and the Applied Materials laboratories in California, and maintains significant national and international linkages within the broader plasma and semiconductor processing industry.

Stephen has founded several technology businesses including:

www.qualflow.com

www.lexasresearch.com

www.arannhealthcare.com

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Research Interests

- Plasma Medicine
- Advanced plasma process control, measurement and diagnostics for IC manufacturing
- Plasma Enhanced CVD & Surface engineering
- Sustainable Energy Systems
- Processes for the fabrication of novel blue-UV electroluminescent devices

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Contact Information

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Current Research Projects

1. Precision - Plasma Technology for Nano-Manufacturing, funded by Science Foundation Ireland under the strategic reseach cluster programme. (http://www.ncpst.ie)/precision/)

2. Improved Methods to Detect and Decontaminate Environmental Sources of Healthcare-Associated Infection. Funded by the Health Research Board & Science Foundation Ireland under the Translational Research Awards 2010. This is a collaborative project with Professor Hilary Humphreys in RCSI/Beaumont Hospital.

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3. FP7 funded 'improve' - Implementing manufacturing science solutions to increase equipment productivity and fab performance. (http://www.eniac-improve.eu/)

4. IRCSET Enterprise Partnership: Remote Monitoring & Control of "Renewable Energy" Installations

5. IRCSET Enterprise Partnership: Energy Monitoring and Management System Design and Development

Recent Projects and Active Interests

Plasma enhanced chemical vapor deposition of oxide-based coatings for biomedical device applications

Sterilisation methods for pre-treatment of hospital water systems for the eradication of microbial contamination

Measurement and Control of Atmospheric Plasmas

Principal Investigator, ‘Non-Invasive Magnetron Sputtering Target and Process Conditioning Monitor’, Awarded € 88,857 under the Enterprise Ireland Proof of Concept 2005

Collaborator with Prof. Patrick McNally, ‘White Light Flexible Polymer Displays Based on Copper Halide Nanoparticle Electroluminescence’, Awarded € 89,987 under the Enterprise Ireland POC 2005 (Summer)

Researcher, Centre for Future Health and Diagnostics, SFI CSET, 2005

Principal Investigator, Plasma Etching for desired nano-Feature shape and nano-texture: An Advanced Reactor and Simulation Software for Feedback-Loop Plasma Control, Awarded € 300,000 FP6 Specific Targeted Research Project 2005 – 2008

Advanced Plasma Sensors for Virtual Metrology, Funding from Industrial Partner – Intel

Analysis of the Impact of Lens Degradation on Photolithography Capability for IC Manufacturing

Development of Next Generation Plasma Process Endpoint

o Winner, Mallin Invent Award, (Lexas Research), 2005

o Runner-Up, Mallin Invent Award, (Qualflow Systems), 2004

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Research Team

Research Fellows

Dr. Vladimir Milosavljevic

Dr. Ram Prasad Gandhiraman (http://www.dcu.ie/~gandhirr/page1.html[11])

Postdoctoral Researchers

Dr. Muhammad Morshed

*Dr. Satheesh Krishnamurthy (*http://www.dcu.ie/~krishnas/)

Dr. Orla Cahill

PhD/MEng Candidates

Evgueni Gudimenko

Samir Kechar (with Dr. Paul Swift)

Niall MacGearailt

K.V. Rajani

Yang Zhang (with Dr. Tony Holohan)

Ruairi Monaghan

Niall O'Connor

Paula Meehan

Jie Yang

Shane Phelan

Ahmed Almousawi

Haitao Gu

Zheng Liang

Boris Dolinaj

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11. http://www.dcu.ie/~gandhirr/page1.html

Graduates

Dr. Gomathi Natarajan (PhD)

Dr. Ram Prasad Gandhiraman (PhD)

Rajesh Joshi (MEng)

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List of Publications

Refereed Journal Publications

Title: Disinfection of meticillin-resistant *Staphylococcus aureus* and *Staphylococcus epidermidis* biofilms using a remote non-thermal gas plasma

Author(s):**J.J. Cotter[a], P. Maguire[b], F. Soberon[b], S. Daniels[c], J.P. O'Gara[d] and E. Casey[a,]**

Source: **Journal of Hospital Infection** Volume 78, Issue 3, July 2011, Pages 204-207

Title: Deposition of chemically reactive and repellent sites on biosensor chips for reduced non-specific binding (vol 79, pg 270, 2010)
Author(s): Gandhiraman RP (Gandhiraman, R. P.)[1], Gubala V (Gubala, V.)[1], Nam CHL (Nam Cao Hoai Le)[1], Volcke C (Volcke, C.)[2], Doyle C (Doyle, C.)[3], James B (James, B.)[3], Daniels S (Daniels, S.)[1,4], Williams DE (Williams, D. E.)[1,5]

Source: COLLOIDS AND SURFACES B-BIOINTERFACES Volume: 84 Issue: 2 Pages: 598-598 Published: JUN 1 2011

Title: Raman scattering analysis of silicon dioxide single crystal treated by direct current plasma discharge
Author(s): Popovic DM (Popovic, D. M.)[1], Milosavljevic V (Milosavljevic, V.)[1,2], Zekic A (Zekic, A.)[1], Romcevic N (Romcevic, N.)[3], Daniels S (Daniels, S.)[2]
Source: APPLIED PHYSICS LETTERS Volume: 98 Issue: 5 Article Number: 051503 Published: JAN 31 2011

Title: TIRF microscopy as a screening method for non-specific binding on surfaces
Author(s): Charlton C (Charlton, Christy)[1], Gubala V (Gubala, Vladimir), Gandhiraman RP (Gandhiraman, Ram Prasad), Wiechecki J (Wiechecki, Julie), Le NCH (Le, Nam Cao Hoai), Coyle C (Coyle, Conor)[2], Daniels S (Daniels, Stephen)[2], MacCraith BD (MacCraith, Brian D.), Williams DE (Williams, David E.)[3]
Source: JOURNAL OF COLLOID AND INTERFACE SCIENCE Volume: 354 Issue: 1 Pages: 405-409 Published: FEB 1 2011

Title: Total internal reflection ellipsometry as a label-free assessment method for optimization of the reactive surface of bioassay devices based on a functionalized cycloolefin polymer
Author(s): Le NCH (Le, Nam Cao Hoai)[1], Gubala V (Gubala, Vladimir)[1], Gandhiraman RP (Gandhiraman, Ram P.)[1], Coyle C (Coyle, Conor)[1,2], Daniels S (Daniels, Stephen)[1,2], Williams DE (Williams, David E.)[1,3]
Source: ANALYTICAL AND BIOANALYTICAL CHEMISTRY Volume: 398 Issue: 5 Pages: 1927-1936 Published: NOV 2010

Title: Functionalization of cyclo-olefin polymer substrates by plasma oxidation: Stable film containing carboxylic acid groups for capturing biorecognition elements
Author(s): Gubala V (Gubala, Vladimir)[1], Le NCH (Le, Nam Cao Hoai)[1], Gandhiraman RP (Gandhiraman, Ram Prasad)[1], Coyle C (Coyle, Conor)[1], Daniels S (Daniels, Stephen)[1,2], Williams DE (Williams, David E.)[1,2]

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Source: COLLOIDS AND SURFACES B-BIOINTERFACES Volume: 81 Issue: 2 Pages: 544-548 Published: DEC 1 2010

Title: Effect of Positive Photoresist on Silicon Etching by Reactive Ion Etching Process
Author(s): Morshed MM, Daniels SM
Source: IEEE TRANSACTIONS ON PLASMA SCIENCE Volume: 38 Issue: 6 Pages: 1512-1516 Part: Part 2 Published: JUN 2010

Title: Effects of Ar and O-2 additives on photopatternable sol-gel etching in an SF6-based plasma for planar lightwave circuit fabrication
Author(s): Kolodziejczyk B, Ellingboe AR, Daniels S, et al.
Source: MICROELECTRONIC ENGINEERING Volume: 87 Issue: 11 Pages: 2071-2076 Published: NOV 2010

Title: Ultrathin chromium transparent metal contacts by pulsed dc magnetron sputtering
Author(s): Rajani KV, Daniels S, McNally PJ, et al.
Source: PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE Volume: 207 Issue: 7 Pages: 1586-1589 Published: JUL 2010

Title: Plasma Treatment of Natural Jute Fibre by RIE 80 plus Plasma Tool
Author(s): Morshed MM, Alam MM, Daniels SM
Source: PLASMA SCIENCE & TECHNOLOGY Volume: 12 Issue: 3 Pages: 325-329 Published: JUN 2010

Title: Deposition of chemically reactive and repellent sites on biosensor chips for reduced non-specific binding
Author(s): Gandhiraman RP (Gandhiraman, R. P.)[1], Gubala V (Gubala, V.)[1], Le CHN (Le Cao Hoai Nam)[1], Volcke C (Volcke, C.)[2], Doyle C (Doyle, C.)[3], James B (James, B.)[3], Daniels S (Daniels, S.)[1,4], Williams DE (Williams, D. E.)[1,5]
Source: COLLOIDS AND SURFACES B-BIOINTERFACES Volume: 79 Issue: 1 Pages: 270-275

Title: Interaction of Plasma Deposited HMDSO-Based Coatings with Fibrinogen and Human Blood Plasma: The Correlation between Bulk Plasma, Surface Characteristics and Biomolecule Interaction
Author(s): Gandhiraman RP (Gandhiraman, Ram P.)[1], Muniyappa MK (Muniyappa, Mohan Kumar)[2], Dudek M (Dudek, Magdalena)[1], Coyle C (Coyle, Conor)[1,3], Volcke C (Volcke, Cedric)[1,4], Killard AJ (Killard, Anthony J.)[1], Burham P (Burham, Paul)[5], Daniels S (Daniels, Stephen)[1,3], Barron N (Barron, Niall)[2], Clynes M (Clynes, Martin)[2], Cameron DC (Cameron, David C.)[6]
Source: PLASMA PROCESSES AND POLYMERS Volume: 7 Issue: 5 Pages: 411-421 Published: MAY 21 2010

Title: Non-invasive VHF monitoring of low-temperature atmospheric pressure plasma
Author(s): Law VJ, Daniels S, Walsh JL, et al.
Source: PLASMA SOURCES SCIENCE & TECHNOLOGY Volume: 19 Issue: 3 Article Number: 034008 Published: JUN 2010

Title: Functionalization of cycloolefin polymer surfaces by plasma-enhanced chemical vapour deposition: comprehensive characterization and analysis of the contact surface and the bulk of aminosiloxane coatings
Author(s): Gubala V (Gubala, Vladimir)[1], Gandhiraman RP (Gandhiraman, Ram Prasad)[1], Volcke C (Volcke, Cedric)[2], Doyle C (Doyle, Colin)[3], Coyle C (Coyle, Connor)[1,4], James B (James, Bryony)[3], Daniels S (Daniels, Stephen)[1,4], Williams DE (Williams, David E.)[5]
Source: ANALYST Volume: 135 Issue: 6 Pages: 1375-1381 Published: 2010

Title: High efficiency amine functionalization of cycloolefin polymer surfaces for biodiagnostics
Author(s): Gandhiraman RP (Gandhiraman, Ram P.)[1], Volcke C (Volcke, Cedric)[2], Gubala V (Gubala, Vladimir)[1], Doyle C (Doyle, Colin)[3], Basabe-Desmonts L (Basabe-Desmonts, Lourdes)[1], Dotzler C (Dotzler,

Christian)[4,5], Toney MF (Toney, Michael F.)[5], Iacono M (Iacono, Marcello)[1], Nooney RI (Nooney, Robert I.)[1], Daniels S (Daniels, Stephen)[1,6], James B (James, Bryony)[3], Williams DE (Williams, David E.)[7]
Source: JOURNAL OF MATERIALS CHEMISTRY Volume: 20 Issue: 20 Pages: 4116-4127 Published: 2010

Title: Reactive amine surfaces for biosensor applications, prepared by plasma-enhanced chemical vapour modification of polyolefin materials
Author(s): Volcke C (Volcke, C.)[1,2], Gandhiraman RP (Gandhiraman, R. P.)[2], Gubala V (Gubala, V.)[2], Raj J (Raj, J.)[3], Cummins T (Cummins, Th.)[2,4], Fonder G (Fonder, G.)[5], Nooney RI (Nooney, R. I.)[2], Mekhalif Z (Mekhalif, Z.)[5], Herzog G (Herzog, G.)[3], Daniels S (Daniels, S.)[2,6], Arrigan DWM (Arrigan, D. W. M.)[3], Cafolla AA (Cafolla, A. A.)[2,4], Williams DE (Williams, D. E.)[2,7]
Source: BIOSENSORS & BIOELECTRONICS Volume: 25 Issue: 8 Pages: 1875-1880 Published: APR 15 2010

Title: Comparison of pilot and industrial scale atmospheric pressure glow discharge systems including a novel electro-acoustic technique for process monitoring
Author(s): Tynan J (Tynan, J.)[1], Law VJ (Law, V. J.)[2], Ward P (Ward, P.)[3], Hynes AM (Hynes, A. M.)[1], Cullen J (Cullen, J.)[3], Byrne G (Byrne, G.)[1], Daniels S (Daniels, S.)[2], Dowling DP (Dowling, D. P.)[1]
Source: PLASMA SOURCES SCIENCE & TECHNOLOGY Volume: 19 Issue: 1 Article Number: 015015 Published: FEB 2010

Title: Hybrid organic-inorganic spin-on-glass CuCl films for optoelectronic applications
Author(s): Alam MM (Alam, M. M.)[1], Lucas FO (Lucas, F. Olabanji)[1], Danieluk D (Danieluk, D.)[2], Bradley AL (Bradley, A. L.)[2], Rajani KV (Rajani, K. V.)[1], Daniels S (Daniels, S.)[1], McNally PJ (McNally, P. J.)[1]
Source: JOURNAL OF PHYSICS D-APPLIED PHYSICS Volume: 42 Issue: 22 Article Number: 225307

Title: Evaluation of a Range of Surface Modifications for the Enhancement of Lateral Flow Assays on Cyclic Polyolefin Micropillar Devices
Author(s): Dudek MM (Dudek, Magdalena M.)[1], Gandhiraman RP (Gandhiraman, R. P.)[1], Volcke C (Volcke, C.)[1,2], Daniels S (Daniels, Stephen)[1,3], Killard AJ (Killard, Anthony J.)[1]
Source: PLASMA PROCESSES AND POLYMERS Volume: 6 Issue: 10 Pages: 620-630 Published: OCT 14 2009

Title: Evaluation of real-time non-invasive diagnostic tools for the monitoring of a pilot scale atmospheric pressure plasma system
Author(s): Tynan J (Tynan, J.)[1], Law VJ (Law, V. J.)[2], Twomey B (Twomey, B.)[1], Hynes AM (Hynes, A. M.)[1], Daniels S (Daniels, S.)[2], Byrne G (Byrne, G.)[1], Dowling DP (Dowling, D. P.)[1]
Source: MEASUREMENT SCIENCE & TECHNOLOGY Volume: 20 Issue: 11 Article Number: 115703 Published: NOV 2009

Title: Influence of ion bombardment on the surface functionalization of plasma deposited coatings (vol 203, pg 3521, 2009)
Author(s): Gandhiraman RP, Karkari SK, Daniels SM, et al.
Source: SURFACE & COATINGS TECHNOLOGY Volume: 204 Issue: 1-2 Pages: 228-228 Published: SEP 25 2009

Title: Plasma Surface Modification of Cyclo-olefin Polymers and Its Application to Lateral Flow Bioassays
Author(s): Dudek MM (Dudek, Magdalena M.)[1], Gandhiraman RP (Gandhiraman, R. P.)[1], Volcke C (Volcke, C.)[1,2], Cafolla AA (Cafolla, Attilio A.)[1,3], Daniels S (Daniels, Stephen)[1,4], Killard AJ (Killard, Anthony J.)[1]
Source: LANGMUIR Volume: 25 Issue: 18 Pages: 11155-11161 Published: SEP 15 2009

Title: Influence of ion bombardment on the surface functionalization of plasma deposited coatings
Author(s): Gandhiraman RP, Karkari SK, Daniels SM, et al.

Source: SURFACE & COATINGS TECHNOLOGY Volume: 203 Issue: 23 Pages: 3521-3526 Published: AUG 25 2009

Title: Electrical properties of gamma-CuCl thin films
Author(s): Lucas FO, McNally PJ, Daniels S, et al.
Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 20 Pages: 144-148 Supplement: Suppl. 1 Published: JAN 2009

Title: Optical properties of CuCl films on silicon substrates
Author(s): Mitra A (Mitra, Anirban)[3], O'Reilly L (O'Reilly, L.)[1], Lucas OF (Lucas, O. F.)[1], Natarajan G (Natarajan, Gomathi)[2], Danieluk D (Danieluk, D.)[3], Bradley AL (Bradley, A. L.)[3], McNally PJ (McNally, P. J.)[1], Daniels S (Daniels, S.)[2], Cameron DC (Cameron, D. C.)[2], Reader A (Reader, A.), Martinz-Rosas M (Martinz-Rosas, M.)[3]
Source: PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS Volume: 245 Issue: 12 Pages: 2808-2814 Published: DEC 2008

Title: Handheld Flyback driven coaxial dielectric barrier discharge: Development and characterization
Author(s): Law VJ (Law, V. J.)[2], Milosavljevic V (Milosavljevic, V.)[1,2,3], O'Connor N (O'Connor, N.)[2,4], Lalor JF (Lalor, J. F.)[2], Daniels S (Daniels, S.)[2,4]
Source: REVIEW OF SCIENTIFIC INSTRUMENTS Volume: 79 Issue: 9 Article Number: 094707 Published: SEP 2008

Title: Influence of target to substrate distance on the sputtered CuCl film properties
Author(s): Natarajan G, Daniels S, Cameron DC, et al.
Source: THIN SOLID FILMS Volume: 516 Issue: 16 Pages: 5531-5535 Published: JUN 30 2008

Title: Temperature dependent optical properties of UV emitting gamma-CuCl thin films
Author(s): Natarajan G, Mitra A, Daniels S, et al.
Source: THIN SOLID FILMS Volume: 516 Issue: 7 Pages: 1439-1442 Published: FEB 15 2008

Title: Non-invasive VHF injected signal monitoring in atmospheric pressure plasma and axial DC magnetron
Author(s): Law VJ, Lawler J, Daniels S
Source: VACUUM Volume: 82 Issue: 5 Pages: 514-520 Published: JAN 8 2008

Title: Morphological, optical and electrical properties of gamma CuCl deposited by vacuum evaporation
Author(s): Lucas FO (Lucas, Francis Olabanji)[1], Mitra A (Mitra, A.)[1], McNally PJ (McNally, P. J.)[1], O'Reilly L (O'Reilly, L.)[1], Daniels S (Daniels, S.)[2], Natarajan G (Natarajan, Gomathi)[2], Durose K (Durose, K.)[3], Proskuryakov YY (Proskuryakov, Y. Y.)[3], Cameron DC (Cameron, D. C.)[4]
Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 19 Issue: 2 Pages: 99-101 Published: FEB 2008

Title: Electrical studies on sputtered CuCl thin films
Author(s): Natarajan G, Kumar RTR, Daniels S, et al.
Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 19 Issue: 2 Pages: 103-106 Published: FEB 2008

Title: Practical sensor for nitrogen in direct current glow discharges
Author(s): Popovic D, Milosavljevic V, Daniels S
Source: JOURNAL OF APPLIED PHYSICS Volume: 102 Issue: 10 Article Number: 103303 Published: NOV 15 2007

Title: A Comparative Study of Characteristics of SiOxCyHz, TiOx and SiO-TiO Oxide-Based Biocompatible Coatings
Author(s): Gandhiraman RP, Daniels S, Cameron DC
Source: PLASMA PROCESSES AND POLYMERS Volume: 4 Special Issue: Sp. Iss. 1 Pages: S369-S373 Published: APR 2007

Title: Towards the fabrication of a UV light source based on CuCl thin films

Author(s): Mitra A (Mitra, A.), Lucas FO (Lucas, F. O.), O'Reilly L (O'Reilly, L.), McNally PJ (McNally, P. J.), Daniels S (Daniels, S.), Natarajan G (Natarajan, Gornathi)
Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 18 Pages: S21-S23 Supplement: Suppl. 1 Published: OCT 2007

Title: Characterisation of n-type gamma-CuCl on Si for UV optoelectronic applications
Author(s): O'Reilly L (O'Reilly, L.), Mitra A (Mitra, A.), Lucas FO (Lucas, F. O.), Natarajan G (Natarajan, Gomathi), McNally PJ (McNally, P. J.), Daniels S (Daniels, S.), Lankinen A (Lankinen, A.), Lowney D (Lowney, D.), Bradley AL (Bradley, A. L.), Cameron DC (Cameron, D. C.)
Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 18 Pages: S57-S60 Supplement: Suppl. 1 Published: OCT 2007

Title: Evaluation of the chemical, electronic and optoelectronic properties of gamma-CuCl thin films and their fabrication on Si substrates
Author(s): Lucas FO (Lucas, F. O.), Mitra A (Mitra, A.), McNally PJ (McNally, P. J.), Daniels S (Daniels, S.), Bradley AL (Bradley, A. L.), Taylor DM (Taylor, D. M.), Proskuryakov YY (Proskuryakov, Y. Y.), Durose K (Durose, K.), Cameron DC (Cameron, D. C.)
Source: JOURNAL OF PHYSICS D-APPLIED PHYSICS Volume: 40 Issue: 11 Pages: 3461-3467 Published: JUN 7 2007

Title: Stoichiometry control of sputtered CuCl thin films: Influence on ultraviolet emission properties
Author(s): Natarajan G, Kumar RTR, Daniels S, et al.
Source: JOURNAL OF APPLIED PHYSICS Volume: 100 Issue: 9 Article Number: 096108 Published: NOV 1 2006

Title: Growth of CuCl thin films by magnetron sputtering for ultraviolet optoelectronic applications
Author(s): Natarajan G, Daniels S, Cameron DC, et al.
Source: JOURNAL OF APPLIED PHYSICS Volume: 100 Issue: 3 Article Number: 033520 Published: AUG 1 2006

Title: Passive radio spectroscopy of an atmospheric plasma
Author(s): Law VJ, Daniels S, Lalor JF, et al.
Source: ELECTRONICS LETTERS Volume: 42 Issue: 12 Pages: 687-688 Published: JUN 8 2006

Title: Encapsulation of the heteroepitaxial growth of wide band gap gamma-CuCl on silicon substrates
Author(s): Lucas FO, O'Reilly L, Natarajan G, McNally PJ, Daniels S, Taylor DM, William S, Cameron DC, Bradley AL, Miltra ASource: JOURNAL OF CRYSTAL GROWTH Volume: 287 Issue: 1 Pages: 112-117 Published: JAN 18 2006

Title: Impact on structural, optical and electrical properties of CuCl by incorporation of Zn for n-type doping
Author(s): O'Reilly L, Mitra A, Natarajan G, Lucas OF, McNally PJ, Daniels S, Cameron DC, Bradley AL, Reader A
Source: JOURNAL OF CRYSTAL GROWTH Volume: 287 Issue: 1 Pages: 139-144 Published: JAN 18 2006

Title: Room-temperature ultraviolet luminescence from gamma-CuCl grown on near lattice-matched silicon
Author(s): O'Reilly L, Lucas OF, McNally PJ, Reader A, Natarajan G, Daniels S, Cameron DC, Mitra A, Martinez-Rosas M, Bradley AL
Source: JOURNAL OF APPLIED PHYSICS Volume: 98 Issue: 11 Article Number: 113512 Published: DEC 1 2005

Title: PECVD of biocompatible coatings on 316L stainless steel
Author(s): Prasad GR, Daniels S, Cameron DC, et al.
Source: SURFACE & COATINGS TECHNOLOGY Volume: 200 Issue: 1-4 Pages: 1031-1035 Published: OCT 1 2005

Title: Growth and characterisation of wide-bandgap, I-VII optoelectronic materials on silicon
Author(s): O'Reilly L, Natarajan G, McNally PJ, Cameron D, Lucas OF, Martinez-Rosas M, Bradley L, Reader A, Daniels S

Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 16 Issue: 7 Pages: 415-419 Published: JUL 2005

Title: Refractive elements produced in photopolymer layers
Author(s): O'Neill FT, Carr AJ, Daniels SM, et al.
Source: JOURNAL OF MATERIALS SCIENCE Volume: 40 Issue: 15 Pages: 4129-4132 Published: AUG 2005

Title: Examination of thin film uniformity at the bottom of a hole structure using a 3D sputter simulation package
Author(s): Daniels S, Cameron DC
Source: JOURNAL DE PHYSIQUE III Volume: 6 Issue: 9 Pages: 1213-1218 Published: SEP 1996

Title: Magnetron sputtering of TiN protective coatings for medical applications
Author(s): Kola PV, Daniels S, Cameron DC, et al.
Source: JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 56 Issue: 1-4 Pages: 422-430 Published: JAN 1996

Published Conference Proceedings

1. G. Natarajan, L. O'Reilly, S. Daniels, D. C. Cameron, P. J.McNally, O. Lucas, A. Reader, A. Mitra, L. Bradley, Structural and Optoelectronic Properties of Sputtered Copper (I) Chloride, Proc. SPIE Int. Soc. Opt Eng. 5825, 364 (2005), Dublin Ireland, 4 – 6 April 2005

2. L. O'Reilly, G. Natarajan, P.J. McNally, S. Daniels, O.F. Lucas, A. Mitra, M. Martinez-Rosas and A. L. Bradley, The use of wide-bandgap CuCl on silicon for ultra-violet photonics, Proc. SPIE Int. Soc. Opt Eng. 5825, 29 (2005), Dublin Ireland, 4 – 6 April 2005

3. Feidhlim T. O'Neill, Alun J. Carr, Stephen M. Daniels, Michael R. Gleeson , John V. Kelly[1], Justin R. Lawrence[4], John T. Sheridan1, "Photo-embossed optical elements and microfluidic lens fabrication", Proc. SPIE Int. Soc. Opt Eng. 5825,(2005), Dublin Ireland, 4 – 6 April 2005

4. Optoelectronic Properties of RF Sputtered CuCl Thin Films, Gomathi Natarajan[1], Anirban Mitra[2], Lisa O'Reilly[1], Stephen Daniels[1], David C. Cameron[3], Patrick J. McNally[1], Olabanji Lucas[1], Louise Bradley[2] , Mater. Res. Soc. Symp. Proc, Vol. 891, 0891-EE03-22.1, Boston USA, 28 Nov – 2 Dec, 2005

5. S. Daniels, J. Ryder, P. T. Connolly, E. Ahearne, D. Hughes, Design, Validation and Optimisation of a Production Process Flow using a Discrete Event Simulation Package, Proceedings of the International Manufacturing Conference, Cork 2002

6. G. P. Beyer, K. Maex, S. Daniels, N. Maity, D. Bassanini, IMP Liners for Al Via Speed Fill, Proceedings of the Advanced Metallisation Conference, Colorado Springs 1998, Materials Research Society, Warrendale, PA (1999) 433

7. S. Daniels, D. C. Cameron, Monte Carlo Simulation of Particle Fluxes in the Magnetron Sputtering Process, Proc. of Advances in Materials and Processing Technologies, August 1995, pages 953 – 958

Presented Papers

1. Invited Talk - Biocompatible Coatings with Silicon and Titanium Oxides Deposited by PECVD, G. R. Prasad, S. Daniels, D. C. Cameron, E. Tully, R. O'Kennedy, 3rd Mikkeli International Industrial Coating Seminar, Mikkeli, Finland, March 2006

2. O. F. Lucas, L. O'Reilly, G. Natarajan, P.J. McNally, S. Daniels, D.M. Taylor, S. William, D.C. Cameron, A. L. Bradley, A. Mitra , Encapsulation of the heteroepitaxial growth of wide Bandgap CuCl on Silicon Substrates, Presented at the 3rd International Conference on Advanced Materials (ICMAT), Singapore, 3-8 July 2005.

3. L. O'Reilly, G. Natarajan, O. F. Lucas, P. J. McNally, S. Daniels, A. Mitra, L. Bradley, D. C. Cameron, A. Reader, Ultra-violet electroluminescence using wide-bandgap CuCl on silicon, Presented at the 3rd International Conference on Advanced Materials (ICMAT), Singapore, 3-8 July 2005.

4. G. R. Prasad, S. Daniels, D. C. Cameron, B. P. McNamara, E. Tully, R. O'Kennedy, Adhesion Improvement of Plasma Polymerized HMDSO Films on Medical Grade Stainless Steel by Plasma Pretreatment and Layering, Presented at the International Workshop on Plasma Polymers and Related Materials, Oct 2004, Antalya, Turkey

5. G. Natarajan, S. Daniels, D. C. Cameron, L. O'Reilly, P. McNally, Plasma Diagnostics for the RF Physical Vapour Deposition of CuCl Thin Films, Presented at the 57th Gaseous Electronics Conference, September 2004, Ireland

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