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2020

Au-free recessed Ohmic contacts to AlGaN/GaN high electron mobility transistor: Study of etch chemistry and metal scheme.
Niranjan S, Guiney I, Humphreys CJ, Sen P, Muralidharan R and Nath DN. *Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics vol. 38, (3).*

A Novel Technique to Investigate the Role of Traps in the Off-State Performance of AlGaN/GaN High Electron Mobility Transistor on Si Using Substrate Bias.
Remesh N, Kumar S, Guiney I, Humphreys CJ, Raghavan S, Muralidharan R and Nath DN. *Physica Status Solidi (a) Applications and Materials Science vol. 217, (7).*

Unexpected softness of bilayer graphene and softening of A-A stacked graphene layers.
Sun Y, Holec D, Gehringer D, Fenwick O, Dunstan D and Humphreys C. *Physical Review B: Condensed Matter and Materials Physics vol. 101,.American Physical Society.*

2019

Effect of Size on the Luminescent Efficiency of Perovskite Nanocrystals.
Griffiths JT, Wisnivesky Rocca Rivarola F, Davis NJLK, Ahumada-Lazo R, Alanis JA, Parkinson P, Binks DJ, Fu WY, De La Pena F, Price MB, Howkins A, Boyd I, Humphreys CJ, Greenham NC and Ducati C. *Acs Applied Energy Materials vol. 2, (10) 6998-7004.*

InGaN as a substrate for AC photoelectrochemical imaging.
Zhou B, Das A, Kappers M, Oliver R, Humphreys C and Krause S. *Sensors.Mdpi.*

3D strain in 2D materials: to what extent is monolayer graphene graphite?.
Sun YW, Liu W, Hernandez I, Gonzalez J, Rodriguez F, Dunstan DJ and Humphreys C. *Physical Review Letters vol. 123, 135501-135501.American Physical Society.*

Insight into the impact of atomic- and nano-scale indium distributions on the optical properties of InGaN/GaN quantum well structures grown on m -plane freestanding GaN substrates.
Tang F, Zhu T, Fu WY, Oehler F, Zhang S, Griffiths JT, Humphreys C, Martin TL, Bagot PAJ, Moody MP, Patra SK, Schulz S, Dawson P, Church S, Jacobs J and Oliver RA. *Journal of Applied Physics vol. 125, (22).*

Optical and structural properties of dislocations in InGaN.
Massabuau FCP, Horton MK, Pearce E, Hammersley S, Chen P, Zielinski MS, Weatherley TFK, Divitini G, Edwards PR, Kappers MJ, McAleese C, Moram MA, Humphreys CJ, Dawson P and Oliver RA. *Journal of Applied Physics vol. 125, (16).*

Optical properties of c-Plane InGaN/GaN single quantum wells as a function of total electric field strength.
Christian GM, Schulz S, Hammersley S, Kappers MJ, Frentrup M, Humphreys CJ, Oliver RA and Dawson P. *Japanese Journal of Applied Physics vol. 58,.*

Effect of humidity on the interlayer interaction of bilayer graphene.
Qadir A, Sun YW, Liu W, Oppenheimer PG, Xu Y, Humphreys CJ and Dunstan DJ. *Physical Review B vol. 99, (4).*

Vertical Current Transport in AlGaN/GaN HEMTs on Silicon: Experimental Investigation and Analytical Model.
Remesh N, Mohan N, Kumar S, Prabhu S, Guiney I, Humphreys CJ, Raghavan S, Muralidharan R and Nath DN. *Ieee Transactions On Electron Devices vol. 66, (1) 613-618.*

2018

Photomodulated Reflectivity Measurement of Free-Carrier Dynamics in InGaN/GaN Quantum Wells.
Halsall MP, Crowe IF, Mullins J, Oliver RA, Kappers MJ and Humphreys CJ. *Acs Photonics vol. 5, (11) 4437-4446.*

What is red? on the chromaticity of orange-red InGaN/GaN based LEDs.
Robin Y, Pristovsek M, Amano H, Oehler F, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 124, (18).*

Recombination from polar InGaN/GaN quantum well structures at high excitation carrier densities.
Christian GM, Schulz S, Kappers MJ, Humphreys CJ, Oliver RA and Dawson P. *Physical Review B vol. 98, (15).*

Effects of a Si-doped InGaN underlayer on the optical properties of InGaN/GaN quantum well structures with different numbers of quantum wells.
Christian G, Kappers M, Massabuau F, Humphreys C, Oliver R and Dawson P. *Materials vol. 11, (9).*

Effect of growth temperature and V/III-ratio on the surface morphology of MOVPE-grown cubic zincblende GaN.
Lee LY, Frentrup M, Kappers MJ, Oliver RA, Humphreys CJ and Wallis DJ. *Journal of Applied Physics vol. 124, (10).*

Vertical leakage mechanism in GaN on Si high electron mobility transistor buffer layers.
Choi FS, Griffiths JT, Ren C, Lee KB, Zaidi ZH, Houston PA, Guiney I, Humphreys CJ, Oliver RA and Wallis DJ. *Journal of Applied Physics vol. 124, (5).*

Response to letter from Wayne Osborn.
Humphreys C and Waddington G. *Astronomy and Geophysics vol. 59, (4).*

Impact of stress in ICP-CVD SiNx passivation films on the leakage current in AlGaN/GaN HEMTs.
Cho SJ, Li X, Guiney I, Floros K, Hemakumara D, Wallis DJ, Humphreys C and Thayne IG. *Electronics Letters vol. 54, (15) 947-949.*

Effects of surface plasma treatment on threshold voltage hysteresis and instability in metal-insulator-semiconductor (MIS) AlGaN/GaN heterostructure HEMTs.
Zaidi ZH, Lee KB, Roberts JW, Guiney I, Qian H, Jiang S, Cheong JS, Li P, Wallis DJ, Humphreys CJ, Chalker PR and Houston PA. *Journal of Applied Physics vol. 123, (18).*

Effect of stacking faults on the photoluminescence spectrum of zincblende GaN.
Church SA, Hammersley S, Mitchell PW, Kappers MJ, Lee LY, Massabuau F, Sahonta SL, Frentrup M, Shaw LJ, Wallis DJ, Humphreys CJ, Oliver RA, Binks DJ and Dawson P. *Journal of Applied Physics vol. 123, (18).*

Resonant photoluminescence studies of carrier localisation in c-plane InGaN/GaN quantum well structures.
Blenkhorn WE, Schulz S, Tanner DSP, Oliver RA, Kappers MJ, Humphreys CJ and Dawson P. *Journal of Physics Condensed Matter vol. 30, (17).*

Illuminating theory on early solar eclipse.
Humphreys C and Waddington G. *Astronomy and Geophysics vol. 59, (1).*

Nanoscale structural and chemical analysis of F-implanted enhancement-mode InAlN/GaN heterostructure field effect transistors.
Tang F, Lee KB, Guiney I, Frentrup M, Barnard JS, Divitini G, Zaidi ZH, Martin TL, Bagot PA, Moody MP, Humphreys CJ, Houston PA, Oliver RA and Wallis DJ. *Journal of Applied Physics vol. 123, (2).*

Quantitative doping contrast profiling of p-n junctions in Si with the scanning electron microscope.
Kazemian P, Schönjahn C and Humphreys CJ. *Microscopy of Semiconducting Materials 2003.*

2017

The ABC model of recombination reinterpreted: Impact on understanding carrier transport and efficiency droop in InGaN/GaN light emitting diodes.
Hopkins MA, Allsopp DWE, Kappers MJ, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 122, (23).*

Temperature and Bias Dependent Trap Capture Cross Section in AlGaN/GaN HEMT on 6-in Silicon with Carbon-Doped Buffer.
Kumar S, Gupta P, Guiney I, Humphreys CJ, Raghavan S, Muralidharan R and Nath DN. *Ieee Transactions On Electron Devices vol. 64, (12) 4868-4874.*

All-GaN-Integrated Cascode Heterojunction Field Effect Transistors.
Jiang S, Lee KB, Guiney I, Miaja PF, Zaidi ZH, Qian H, Wallis DJ, Forsyth AJ, Humphreys CJ and Houston PA. *Ieee Transactions On Power Electronics vol. 32, (11) 8743-8750.*

Solar eclipse of 1207 BC helps to date pharaohs.
Humphreys C and Waddington G. *Astronomy and Geophysics vol. 58, (5) 5.39-5.42.*

Machine Learning Predicts Laboratory Earthquakes.
Rouet-Leduc B, Hulbert C, Lubbers N, Barros K, Humphreys CJ and Johnson PA. *Geophysical Research Letters vol. 44, (18) 9276-9282.*

X-ray diffraction analysis of cubic zincblende III-nitrides.
Frentrup M, Lee LY, Sahonta SL, Kappers MJ, Massabuau F, Gupta P, Oliver RA, Humphreys CJ and Wallis DJ. *Journal of Physics D: Applied Physics vol. 50, (43).*

Dislocations in AlGaN: Core structure, atom segregation, and optical properties.
Massabuau FCP, Rhode SL, Horton MK, O'Hanlon TJ, Kovács A, Zielinski MS, Kappers MJ, Dunin-Borkowski RE, Humphreys CJ and Oliver RA. *Nano Letters vol. 17, (8) 4846-4852.*

Automatized convergence of optoelectronic simulations using active machine learning.
Rouet-Leduc B, Hulbert C, Barros K, Lookman T and Humphreys CJ. *Applied Physics Letters vol. 111, (4).*

The atomic structure of polar and non-polar InGaN quantum wells and the green gap problem.
Humphreys CJ, Griffiths JT, Tang F, Oehler F, Findlay SD, Zheng C, Etheridge J, Martin TL, Bagot PAJ, Moody MP, Sutherland D, Dawson P, Schulz S, Zhang S, Fu WY, Zhu T, Kappers MJ and Oliver RA. *Ultramicroscopy vol. 176, 93-98.*

Structural impact on the nanoscale optical properties of InGaN core-shell nanorods.
Griffiths JT, Ren CX, Coulon PM, Le Boulbar ED, Bryce CG, Girgel I, Howkins A, Boyd I, Martin RW, Allsopp DWE, Shields PA, Humphreys CJ and Oliver RA. *Applied Physics Letters vol. 110, (17).*

Evolution of the m-Plane quantum well morphology and composition within a GaN/InGaN core-shell structure.
Coulon PM, Vajargah SH, Bao A, Edwards PR, Le Boulbar ED, Girgel I, Martin RW, Humphreys CJ, Oliver RA, Allsopp DWE and Shields PA. *Crystal Growth and Design vol. 17, (2) 474-482.*

Novel GaN-based vertical heterostructure field effect transistor structures using crystallographic KOH etching and overgrowth.
Qian H, Lee KB, Vajargah SH, Novikov SV, Guiney I, Zaidi ZH, Jiang S, Wallis DJ, Foxon CT, Humphreys CJ and Houston PA. *Journal of Crystal Growth vol. 459, 185-188.*

Structural and magnetic properties of ultra-thin Fe films on metal-organic chemical vapour deposited GaN(0001).
Kim JY, Ionescu A, Mansell R, Farrer I, Oehler F, Kinane CJ, Cooper JFK, Steinke NJ, Langridge S, Stankiewicz R, Humphreys CJ, Cowburn RP, Holmes SN and Barnes CHW. *Journal of Applied Physics vol. 121, (4).*

Carrier localization in the vicinity of dislocations in InGaN.
Massabuau FCP, Chen P, Horton MK, Rhode SL, Ren CX, O'Hanlon TJ, Kovács A, Kappers MJ, Humphreys CJ, Dunin-Borkowski RE and Oliver RA. *Journal of Applied Physics vol. 121, (1).*

Perspectives on electronic and photonic materials.
Smeeton T and Humphreys C. *Springer Handbooks.*

2016

Growth of free-standing bulk wurtzite AlxGa1-xN layers by molecular beam epitaxy using a highly efficient RF plasma source.
Novikov SV, Staddon CR, Sahonta SL, Oliver RA, Humphreys CJ and Foxon CT. *Journal of Crystal Growth vol. 456, 151-154.*

Local carrier recombination and associated dynamics in m-plane InGaN/GaN quantum wells probed by picosecond cathodoluminescence.
Zhu T, Gachet D, Tang F, Fu WY, Oehler F, Kappers MJ, Dawson P, Humphreys CJ and Oliver RA. *Applied Physics Letters vol. 109, (23).*

Dielectric response of wurtzite gallium nitride in the terahertz frequency range.
Hibberd MT, Frey V, Spencer BF, Mitchell PW, Dawson P, Kappers MJ, Oliver RA, Humphreys CJ and Graham DM. *Solid State Communications vol. 247, 68-71.*

Theoretical and experimental analysis of the photoluminescence and photoluminescence excitation spectroscopy spectra of m -plane InGaN/GaN quantum wells.
Schulz S, Tanner DSP, O'Reilly EP, Caro MA, Tang F, Griffiths JT, Oehler F, Kappers MJ, Oliver RA, Humphreys CJ, Sutherland D, Davies MJ and Dawson P. *Applied Physics Letters vol. 109, (22).*

A study of the optical and polarisation properties of InGaN/GaN multiple quantum wells grown on a-plane and m-plane GaN substrates.
Kundys D, Sutherland D, Davies MJ, Oehler F, Griffiths J, Dawson P, Kappers MJ, Humphreys CJ, Schulz S, Tang F and Oliver RA. *Sci Technol Adv Mater vol. 17, (1) 736-743.*

Nano-cathodoluminescence reveals the effect of electron damage on the optical properties of nitride optoelectronics and the damage threshold.
Griffiths JT, Zhang S, Lhuillier J, Zhu D, Fu WY, Howkins A, Boyd I, Stowe D, Wallis DJ, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 120, (16).*

Determination of axial and lateral exciton diffusion length in GaN by electron energy dependent cathodoluminescence.
Hocker M, Maier P, Jerg L, Tischer I, Neusser G, Kranz C, Pristovsek M, Humphreys CJ, Leute RAR, Heinz D, Rettig O, Scholz F and Thonke K. *Journal of Applied Physics vol. 120, (8).*

High-quality III-nitride films on conductive, transparent (201)-oriented ?-Ga2O3 using a GaN buffer layer.
Muhammed MM, Roldan MA, Yamashita Y, Sahonta SL, Ajia IA, Iizuka K, Kuramata A, Humphreys CJ and Roqan IS. *Scientific Reports vol. 6,.*

Structural and optical properties of (1122) InGaN quantum wells compared to (0001) and (1120).
Pristovsek M, Han Y, Zhu T, Oehler F, Tang F, Oliver RA, Humphreys CJ, Tytko D, Choi PP, Raabe D, Brunner F and Weyers M. *Semiconductor Science and Technology vol. 31, (8).*

Combined electrical and resonant optical excitation characterization of multi-quantum well InGaN-based light-emitting diodes.
Presa S, Maaskant PP, Kappers MJ, Humphreys CJ and Corbett B. *Aip Advances vol. 6, (7).*

Comparative studies of efficiency droop in polar and non-polar InGaN quantum wells.
Davies MJ, Dawson P, Hammersley S, Zhu T, Kappers MJ, Humphreys CJ and Oliver RA. *Applied Physics Letters vol. 108, (25).*

Terahertz cyclotron resonance spectroscopy of an AlGaN/GaN heterostructure using a high-field pulsed magnet and an asynchronous optical sampling technique.
Spencer BF, Smith WF, Hibberd MT, Dawson P, Beck M, Bartels A, Guiney I, Humphreys CJ and Graham DM. *Applied Physics Letters vol. 108, (21).*

The nature of carrier localisation in polar and nonpolar InGaN/GaN quantum wells.
Dawson P, Schulz S, Oliver RA, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 119, (18).*

Characterization of p-GaN1-xAsx/n-GaN PN junction diodes.
Qian H, Lee KB, Vajargah SH, Novikov SV, Guiney I, Zhang S, Zaidi ZH, Jiang S, Wallis DJ, Foxon CT, Humphreys CJ and Houston PA. *Semiconductor Science and Technology vol. 31, (6).*

The microstructure of non-polar a-plane (11 2 0) InGaN quantum wells.
Griffiths JT, Oehler F, Tang F, Zhang S, Fu WY, Zhu T, Findlay SD, Zheng C, Etheridge J, Martin TL, Bagot PAJ, Moody MP, Sutherland D, Dawson P, Kappers MJ, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 119, (17).*

Toward defect-free semi-polar GaN templates on pre-structured sapphire.
Han Y, Caliebe M, Hage F, Ramasse Q, Pristovsek M, Zhu T, Scholz F and Humphreys C. *Physica Status Solidi (B) Basic Research vol. 253, (5) 834-839.*

Subthreshold mobility in AlGaN/GaN HEMTs.
Waller WM, Uren MJ, Lee KB, Houston PA, Wallis DJ, Guiney I, Humphreys CJ, Pandey S, Sonsky J and Kuball M. *Ieee Transactions On Electron Devices vol. 63, (5) 1861-1865.*

Optimisation of GaN LEDs and the reduction of efficiency droop using active machine learning.
Rouet-Leduc B, Barros K, Lookman T and Humphreys CJ. *Scientific Reports vol. 6,.*

Influence of trench period and depth on MOVPE grown (1122) GaN on patterned r-plane sapphire substrates.
Caliebe M, Tandukar S, Cheng Z, Hocker M, Han Y, Meisch T, Heinz D, Huber F, Bauer S, Plettl A, Humphreys C, Thonke K and Scholz F. *Journal of Crystal Growth vol. 440, 69-75.*

Structural and Optical Emission Uniformity of m-Plane InGaN Single Quantum Wells in Core-Shell Nanorods.
Le Boulbar ED, Edwards PR, Vajargah SH, Griffiths I, GÃ®rgel I, Coulon PM, Cherns D, Martin RW, Humphreys CJ, Bowen CR, Allsopp DWE and Shields PA. *Crystal Growth and Design vol. 16, (4) 1907-1916.*

Dislocation core structures in (0001) InGaN.
Rhode SL, Horton MK, Sahonta SL, Kappers MJ, Haigh SJ, Pennycook TJ, McAleese C, Humphreys CJ, Dusane RO and Moram MA. *Journal of Applied Physics vol. 119, (10).*

Control of threshold voltage in E-mode and D-mode GaN-on-Si metal-insulator-semiconductor heterostructure field effect transistors by in-situ fluorine doping of atomic layer deposition Al2O3 gate dielectrics.
Roberts JW, Chalker PR, Lee KB, Houston PA, Cho SJ, Thayne IG, Guiney I, Wallis D and Humphreys CJ. *Applied Physics Letters vol. 108, (7).*

A comparison of the optical properties of InGaN/GaN multiple quantum well structures grown with and without Si-doped InGaN prelayers.
Davies MJ, Hammersley S, Massabuau FCP, Dawson P, Oliver RA, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 119, (5).*

Origins of hillock defects on GaN templates grown on Si(111).
Han Y, Zhu D, Zhu T, Humphreys CJ and Wallis DJ. *Journal of Crystal Growth vol. 434, 123-127.*

Optimizing GaN (1122) hetero-epitaxial templates grown on (1010) sapphire.
Pristovsek M, Frentrup M, Han Y and Humphreys CJ. *Physica Status Solidi (B) Basic Research vol. 253, (1) 61-66.*

N-Type conductivity bound by the growth temperature: The case of Al0.72Ga0.28N highly doped by silicon.
Kakanakova-Georgieva A, Sahonta SL, Nilsson D, Trinh XT, Son NT, JanzÃ©n E and Humphreys CJ. *Journal of Materials Chemistry C vol. 4, (35) 8291-8296.*

Solid-state lighting based on light emitting diode technology.
Zhu D and Humphreys CJ. *Optics in Our Time.*

Growth and coalescence studies of (1122) oriented GaN on pre-structured sapphire substrates using marker layers.
Caliebe M, Han Y, Hocker M, Meisch T, Humphreys C, Thonke K and Scholz F. *Physica Status Solidi (B) Basic Research vol. 253, (1) 46-53.*

2015

Dislocation core structures in Si-doped GaN.
Rhode SL, Horton MK, Fu WY, Sahonta SL, Kappers MJ, Pennycook TJ, Humphreys CJ, Dusane RO and Moram MA. *Applied Physics Letters vol. 107, (24).*

Structural, electronic, and optical properties of m -plane InGaN/GaN quantum wells: Insights from experiment and atomistic theory.
Schulz S, Tanner DP, O'Reilly EP, Caro MA, Martin TL, Bagot PAJ, Moody MP, Tang F, Griffiths JT, Oehler F, Kappers MJ, Oliver RA, Humphreys CJ, Sutherland D, Davies MJ and Dawson P. *Physical Review B - Condensed Matter and Materials Physics vol. 92, (23).*

Difference in linear polarization of biaxially strained i nx G a1-x N alloys on nonpolar a -plane and m -plane GaN.
Zhang S, Cui Y, Griffiths JT, Fu WY, Freysoldt C, Neugebauer J, Humphreys CJ and Oliver RA. *Physical Review B - Condensed Matter and Materials Physics vol. 92, (24).*

Nanocathodoluminescence Reveals Mitigation of the Stark Shift in InGaN Quantum Wells by Si Doping.
Griffiths JT, Zhang S, Rouet-Leduc B, Fu WY, Bao A, Zhu D, Wallis DJ, Howkins A, Boyd I, Stowe D, Kappers MJ, Humphreys CJ and Oliver RA. *Nano Letters vol. 15, (11) 7639-7643.*

Impact of thermal treatment on the optical performance of InGaN/GaN light emitting diodes.
Meneghini M, Zhu D, Humphreys CJ, Berti M, Gasparotto A, Cesca T, Vinattieri A, Bogani F, Meneghesso G and Zanoni E. *Aip Advances vol. 5, (10).*

Effects of quantum well growth temperature on the recombination efficiency of InGaN/GaN multiple quantum wells that emit in the green and blue spectral regions.
Hammersley S, Kappers MJ, Massabuau FCP, Sahonta SL, Dawson P, Oliver RA and Humphreys CJ. *Applied Physics Letters vol. 107, (13).*

Enhancement mode operation in AlInN/GaN (MIS)HEMTs on Si substrates using a fluorine implant.
Zaidi ZH, Lee KB, Guiney I, Qian H, Jiang S, Wallis DJ, Humphreys CJ and Houston PA. *Semiconductor Science and Technology vol. 30, (10).*

Interface State Artefact in Long Gate-Length AlGaN/GaN HEMTs.
Waller WM, Karboyan S, Uren MJ, Lee KB, Houston PA, Wallis DJ, Guiney I, Humphreys CJ and Kuball M. *Ieee Transactions On Electron Devices vol. 62, (8) 2464-2469.*

A study of the inclusion of prelayers in InGaN/GaN single- and multiple-quantum-well structures.
Davies MJ, Dawson P, Massabuau FCP, Fol AL, Oliver RA, Kappers MJ and Humphreys CJ. *Physica Status Solidi (B) Basic Research vol. 252, (5) 866-872.*

Investigation of unintentional indium incorporation into GaN barriers of InGaN/GaN quantum well structures.
Massabuau FCP, Davies MJ, Blenkhorn WE, Hammersley S, Kappers MJ, Humphreys CJ, Dawson P and Oliver RA. *Physica Status Solidi (B) Basic Research vol. 252, (5) 928-935.*

Carrier distributions in InGaN/GaN light-emitting diodes.
Hammersley S, Davies MJ, Dawson P, Oliver RA, Kappers MJ and Humphreys CJ. *Physica Status Solidi (B) Basic Research vol. 252, (5) 890-894.*

Han Y, Caliebe M, Kappers M, Scholz F, Pristovsek M and Humphreys C. *Journal of Crystal Growth vol. 415, 170-175.*

Effect of the barrier growth mode on the luminescence and conductivity micron scale uniformity of InGaN light emitting diodes.
Wallace MJ, Edwards PR, Kappers MJ, Hopkins MA, Oehler F, Sivaraya S, Oliver RA, Humphreys CJ, Allsopp DWE and Martin RW. *Journal of Applied Physics vol. 117, (11).*

Segregation of in to dislocations in InGaN.
Horton MK, Rhode S, Sahonta SL, Kappers MJ, Haigh SJ, Pennycook TJ, Humphreys CJ, Dusane RO and Moram MA. *Nano Letters vol. 15, (2) 923-930.*

Heterogeneous integration of gallium nitride light-emitting diodes on diamond and silica by transfer printing.
Trindade AJ, Guilhabert B, Xie EY, Ferreira R, McKendry JJD, Zhu D, Laurand N, Gu E, Wallis DJ, Watson IM, Humphreys CJ and Dawson MD. *Optics Express vol. 23, (7) 9329-9338.*

Enhancement-mode metal-insulator-semiconductor GaN/AlInN/GaN heterostructure field-effect transistors on Si with a threshold voltage of +3.0V and blocking voltage above 1000 V.
Lee KB, Guiney I, Jiang S, Zaidi ZH, Qian H, Wallis DJ, Uren MJ, Kuball M, Humphreys CJ and Houston PA. *Applied Physics Express vol. 8, (3).*

2014

Sulfuric acid and hydrogen peroxide surface passivation effects on AlGaN/GaN high electron mobility transistors.
Zaidi ZH, Lee KB, Guiney I, Qian H, Jiang S, Wallis DJ, Humphreys CJ and Houston PA. *Journal of Applied Physics vol. 116, (24).*

Evaluation of growth methods for the heteroepitaxy of non-polar (1120) GAN on sapphire by MOVPE.
Oehler F, Sutherland D, Zhu T, Emery R, Badcock TJ, Kappers MJ, Humphreys CJ, Dawson P and Oliver RA. *Journal of Crystal Growth vol. 408, 32-41.*

Growth of non-polar (11-20) InGaN quantum dots by metal organic vapour phase epitaxy using a two temperature method.
Griffiths JT, Zhu T, Oehler F, Emery RM, Fu WY, Reid BPL, Taylor RA, Kappers MJ, Humphreys CJ and Oliver RA. *Apl Materials vol. 2, (12).*

Direct observation of depth-dependent atomic displacements associated with dislocations in gallium nitride.
Lozano JG, Yang H, Guerrero-Lebrero MP, D'Alfonso AJ, Yasuhara A, Okunishi E, Zhang S, Humphreys CJ, Allen LJ, Galindo PL, Hirsch PB and Nellist PD. *Physical Review Letters vol. 113, (13).*

The impact of trench defects in InGaN/GaN light emitting diodes and implications for the green gap problem.
Massabuau FCP, Davies MJ, Oehler F, Pamenter SK, Thrush EJ, Kappers MJ, Kovács A, Williams T, Hopkins MA, Humphreys CJ, Dawson P, Dunin-Borkowski RE, Etheridge J, Allsopp DWE and Oliver RA. *Applied Physics Letters vol. 105, (11).*

The effects of Si-doped prelayers on the optical properties of InGaN/GaN single quantum well structures.
Davies MJ, Dawson P, Massabuau FCP, Oliver RA, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 105, (9).*

How Cutting-Edge Atomic Resolution Microscopy Can Help to Solve Some of the World's Energy Problems.
Humphreys C. *Microscopy and Microanalysis vol. 20, 11-12.*

Bias dependence and correlation of the cathodoluminescence and electron beam induced current from an InGaN/GaN light emitting diode.
Wallace MJ, Edwards PR, Kappers MJ, Hopkins MA, Oehler F, Sivaraya S, Allsopp DWE, Oliver RA, Humphreys CJ and Martin RW. *Journal of Applied Physics vol. 116, (3).*

Investigation of the GaN-on-GaAs interface for vertical power device applications.
Möreke J, Uren MJ, Novikov SV, Foxon CT, Hosseini Vajargah S, Wallis DJ, Humphreys CJ, Haigh SJ, Al-Khalidi A, Wasige E, Thayne I and Kuball M. *Journal of Applied Physics vol. 116, (1).*

Dislocation-related trap levels in nitride-based light emitting diodes.
Venturi G, Castaldini A, Cavallini A, Meneghini M, Zanoni E, Zhu D and Humphreys C. *Applied Physics Letters vol. 104, (21).*

Cathodoluminescence hyperspectral imaging of trench-like defects in InGaN/GaN quantum well structures.
Bruckbauer J, Edwards PR, Sahonta SL, Massabuau FCP, Kappers MJ, Humphreys CJ, Oliver RA and Martin RW. *Journal of Physics D: Applied Physics vol. 47, (13).*

Polarized photoluminescence excitation spectroscopy of a-plane InGaN/GaN multiple quantum wells grown on r-plane sapphire.
Kundys D, Schulz S, Oehler F, Sutherland D, Badcock TJ, Dawson P, Kappers MJ, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 115, (11).*

Low temperature carrier redistribution dynamics in InGaN/GaN quantum wells.
Badcock TJ, Dawson P, Davies MJ, Kappers MJ, Massabuau FCP, Oehler F, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 115, (11).*

Characteristics and applications of micro-pixelated GaN-based light emitting diodes on Si substrates.
Tian P, McKendry JJD, Gong Z, Zhang S, Watson S, Zhu D, Watson IM, Gu E, Kelly AE, Humphreys CJ and Dawson MD. *Journal of Applied Physics vol. 115, (3).*

The impact of growth parameters on trench defects in InGaN/GaN quantum wells.
Massabuau FCP, Le Fol A, Pamenter SK, Oehler F, Kappers MJ, Humphreys CJ and Oliver RA. *Physica Status Solidi (a) Applications and Materials Science vol. 211, (4) 740-743.*

Structure and strain relaxation effects of defects in InxGa1-xN epilayers.
Rhode SL, Fu WY, Moram MA, Massabuau FCP, Kappers MJ, McAleese C, Oehler F, Humphreys CJ, Dusane RO and Sahonta SL. *Journal of Applied Physics vol. 116, (10).*

The impact of substrate miscut on the microstructure and photoluminescence efficiency of (0001) InGaN quantum wells grown by a two-temperature method.
Massabuau FCP, Tartan CC, Traynier R, Blenkhorn WE, Kappers MJ, Dawson P, Humphreys CJ and Oliver RA. *Journal of Crystal Growth vol. 386, 88-93.*

Coincident electron channeling and cathodoluminescence studies of threading dislocations in GaN.
Naresh-Kumar G, Bruckbauer J, Edwards PR, Kraeusel S, Hourahine B, Martin RW, Kappers MJ, Moram MA, Lovelock S, Oliver RA, Humphreys CJ and Trager-Cowan C. *Microscopy and Microanalysis vol. 20, (1) 55-60.*

Correlating electroluminescence characterization and physics-based models of InGaN/GaN LEDs: Pitfalls and open issues.
Calciati M, Goano M, Bertazzi F, Vallone M, Zhou X, Ghione G, Meneghini M, Meneghesso G, Zanoni E, Bellotti E, Verzellesi G, Zhu D and Humphreys C. *Aip Advances vol. 4, (6).*

Comparative study of polar and semipolar (1122) InGaN layers grown by metalorganic vapour phase epitaxy.
Dinh DV, Oehler F, Zubialevich VZ, Kappers MJ, Alam SN, Caliebe M, Scholtz F, Humphreys CJ and Parbrook PJ. *Journal of Applied Physics vol. 116, (15).*

The effects of varying threading dislocation density on the optical properties of InGaN/GaN quantum wells.
Davies MJ, Dawson P, Massabuau FCP, Oehler F, Oliver RA, Kappers MJ, Badcock TJ and Humphreys CJ. *Physica Status Solidi (C) Current Topics in Solid State Physics vol. 11, (3-4) 750-753.*

2013

Elastic constants and critical thicknesses of ScGaN and ScAlN.
Zhang S, Fu WY, Holec D, Humphreys CJ and Moram MA. *Journal of Applied Physics vol. 114, (24).*

Interfacial structure and chemistry of GaN on Ge(111).
Zhang S, Zhang Y, Cui Y, Freysoldt C, Neugebauer J, Lieten RR, Barnard JS and Humphreys CJ. *Physical Review Letters vol. 111, (25).*

Nanoscale-accuracy transfer printing of ultra-thin AlInGaN light-emitting diodes onto mechanically flexible substrates.
Trindade AJ, Guilhabert B, Massoubre D, Zhu D, Laurand N, Gu E, Watson IM, Humphreys CJ and Dawson MD. *Applied Physics Letters vol. 103, (25).*

The impact of gross well width fluctuations on the efficiency of GaN-based light emitting diodes.
Oliver RA, Massabuau FCP, Kappers MJ, Phillips WA, Thrush EJ, Tartan CC, Blenkhorn WE, Badcock TJ, Dawson P, Hopkins MA, Allsopp DWE and Humphreys CJ. *Applied Physics Letters vol. 103, (14).*

Tunable optoelectronic and ferroelectric properties in Sc-based III-nitrides.
Zhang S, Holec D, Fu WY, Humphreys CJ and Moram MA. *Journal of Applied Physics vol. 114, (13).*

Prospects of III-nitride optoelectronics grown on Si.
Zhu D, Wallis DJ and Humphreys CJ. *Reports On Progress in Physics vol. 76, (10).*

The dissociation of the [a + c] dislocation in GaN.
Hirsch PB, Lozano JG, Rhode S, Horton MK, Moram MA, Zhang S, Kappers MJ, Humphreys CJ, Yasuhara A, Okunishi E and Nellist PD. *Philosophical Magazine vol. 93, (28-30) 3925-3938.*

Surface morphology of homoepitaxial c-plane GaN: Hillocks and ridges.
Oehler F, Zhu T, Rhode S, Kappers MJ, Humphreys CJ and Oliver RA. *Journal of Crystal Growth vol. 383, 12-18.*

Measuring the composition of AlGaN layers in GaN based structures grown on 150 mm Si substrates using (2 0 5) reciprocal space maps.
Wallis DJ, Zhu D, Oehler F, Westwater SP, Pujol A and Humphreys CJ. *Semiconductor Science and Technology vol. 28, (9).*

Fundamentals of X-ray diffraction characterisation of strain in GaN based compounds.
Oehler F, Vickers ME, Kappers MJ, Humphreys CJ and Oliver RA. *Japanese Journal of Applied Physics vol. 52, (8 PART 2).*

Electroluminescence analysis and simulation of the effects of injection and temperature on carrier distribution in InGaN-based light-emitting diodes with color-coded quantum wells.
Meneghini M, Vaccari S, Garbujo A, Trivellin N, Zhu D, Humphreys CJ, Calciati M, Goano M, Bertazzi F, Ghione G, Bellotti E, Meneghesso G and Zanoni E. *Japanese Journal of Applied Physics vol. 52, (8 PART 2).*

Evidence for dark states in the temperature dependent recombination dynamics of InGaN/GaN quantum wells.
Badcock TJ, Dawson P, Oliver RA, Kappers MJ and Humphreys CJ. *Japanese Journal of Applied Physics vol. 52, (8 PART 2).*

Carrier density dependent localization and consequences for efficiency droop in InGaN/GaN quantum well structures.
Badcock TJ, Hammersley S, Watson-Parris D, Dawson P, Godfrey MJ, Kappers MJ, McAleese C, Oliver RA and Humphreys CJ. *Japanese Journal of Applied Physics vol. 52, (8 PART 2).*

The effect of dislocations on the efficiency of InGaN/GaN solar cells.
Zhang Y, Kappers MJ, Zhu D, Oehler F, Gao F and Humphreys CJ. *Solar Energy Materials and Solar Cells vol. 117, 279-284.*

Mg doping affects dislocation core structures in GaN.
Rhode SK, Horton MK, Kappers MJ, Zhang S, Humphreys CJ, Dusane RO, Sahonta SL and Moram MA. *Physical Review Letters vol. 111, (2).*

Composition and luminescence studies of InGaN epilayers grown at different hydrogen flow rates.
Taylor E, Fang F, Oehler F, Edwards PR, Kappers MJ, Lorenz K, Alves E, McAleese C, Humphreys CJ and Martin RW. *Semiconductor Science and Technology vol. 28, (6).*

Correlations between the morphology and emission properties of trench defects in InGaN/GaN quantum wells.
Massabuau FCP, Trinh-Xuan L, LodiÃ© D, Thrush EJ, Zhu D, Oehler F, Zhu T, Kappers MJ, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 113, (7).*

The impact of substrate miscut on the morphology of InGaN epitaxial layers subjected to a growth interruption.

Jouvet N, Kappers MJ, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 113, (6).*

High-speed substrate-emitting micro-light-emitting diodes for applications requiring high radiance.
Maaskant PP, Shams H, Akhter M, Henry W, Kappers MJ, Zhu D, Humphreys CJ and Corbett B. *Applied Physics Express vol. 6, (2).*

High excitation carrier density recombination dynamics of InGaN/GaN quantum well structures: Possible relevance to efficiency droop.
Davies MJ, Badcock TJ, Dawson P, Kappers MJ, Oliver RA and Humphreys CJ. *Applied Physics Letters vol. 102, (2).*

The significance of Braggs law in electron diffraction and microscopy, and Braggs second law.
Humphreys CJ. *Acta Crystallographica Section a: Foundations of Crystallography vol. 69, (1) 45-50.*

Properties of trench defects in InGaN/GaN quantum well structures.
Sahonta SL, Kappers MJ, Zhu D, Puchtler TJ, Zhu T, Bennett SE, Humphreys CJ and Oliver RA. *Physica Status Solidi (a) Applications and Materials Science vol. 210, (1) 195-198.*

2012

Morphological, structural, and emission characterization of trench defects in InGaN/GaN quantum well structures.
Massabuau FCP, Sahonta SL, Trinh-Xuan L, Rhode S, Puchtler TJ, Kappers MJ, Humphreys CJ and Oliver RA. *Applied Physics Letters vol. 101, (21).*

Recombination mechanisms in heteroepitaxial non-polar InGaN/GaN quantum wells.
Badcock TJ, Hao R, Moram MA, Kappers MJ, Dawson P, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 112, (1).*

Analysis of defect-related localized emission processes in InGaN/GaN-based LEDs.
Meneghini M, Vaccari S, Trivellin N, Zhu D, Humphreys C, Butendheich R, Leirer C, Hahn B, Meneghesso G and Zanoni E. *Ieee Transactions On Electron Devices vol. 59, (5) 1416-1422.*

The consequences of high injected carrier densities on carrier localization and efficiency droop in InGaN/GaN quantum well structures.
Hammersley S, Watson-Parris D, Dawson P, Godfrey MJ, Badcock TJ, Kappers MJ, McAleese C, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 111, (8).*

Atom probe tomography characterisation of a laser diode structure grown by molecular beam epitaxy.
Bennett SE, Smeeton TM, Saxey DW, Smith GDW, Hooper SE, Heffernan J, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 111, (5).*

Measurement of the Al content in AlGaN epitaxial layers by combined energy-dispersive X-ray and electron energy-loss spectroscopy in a transmission electron microscope.
Amari H, Kappers MJ, Humphreys CJ, ChÃ¨ze C and Walther T. *Physica Status Solidi (C) Current Topics in Solid State Physics vol. 9, (3-4) 1079-1082.*

Determination of the composition and thickness of semi-polar and non-polar III-nitride films and quantum wells using X-ray scattering.
Vickers ME, Hollander JL, McAleese C, Kappers MJ, Moram MA and Humphreys CJ. *Journal of Applied Physics vol. 111, (4).*

Characterization of defects in Mg doped GaN epitaxial layers using conductance measurements.
Elsherif OS, Vernon-Parry KD, Dharmadasa IM, Evans-Freeman JH, Airey RJ, Kappers MJ and Humphreys CJ. *Thin Solid Films vol. 520, (7) 3064-3070.*

Structure and chemistry of the Si(111)/AlN interface.
Radtke G, Couillard M, Botton GA, Zhu D and Humphreys CJ. *Applied Physics Letters vol. 100, (1).*

Growth, microstructure and morphology of epitaxial ScGaN films.
Knoll SM, Zhang S, Joyce TB, Kappers MJ, Humphreys CJ and Moram MA. *Physica Status Solidi (a) Applications and Materials Science vol. 209, (1) 33-40.*

Modification of carrier localization in basal-plane stacking faults: The effect of Si-doping in a-plane GaN.
Badcock TJ, Kappers MJ, Moram MA, Dawson P and Humphreys CJ. *Physica Status Solidi (B) Basic Research vol. 249, (3) 498-502.*

Exciton confinement in narrow non-polar InGaN/GaN quantum wells grown on r-plane sapphire.
Badcock TJ, Kappers MJ, Moram MA, Hao R, Dawson P and Humphreys CJ. *Physica Status Solidi (B) Basic Research vol. 249, (3) 494-497.*

High-efficiency InGaN/GaN quantum well structures on large area silicon substrates.
Zhu D, McAleese C, HÃ¤berlen M, Kappers MJ, Hylton N, Dawson P, Radtke G, Couillard M, Botton GA, Sahonta SL and Humphreys CJ. *Physica Status Solidi (a) Applications and Materials Science vol. 209, (1) 13-16.*

2011

Defect reduction processes in heteroepitaxial non-polar a-plane GaN films.
Hao R, Kappers MJ, Moram MA and Humphreys CJ. *Journal of Crystal Growth vol. 337, (1) 81-86.*

Response to Comment on the effects of Si doping on dislocation movement and tensile stress in GaN films' [J. Appl. Phys. 109, 073509 (2011)].
Moram MA, Kappers MJ, Massabuau F, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 110, (9).*

Structural characterisation of improved GaN epilayers grown on a Ge(111) substrate.
Zhang Y, Fu WY, Humphreys C and Lieten R. *Applied Physics Express vol. 4, (9).*

The effect of dislocation density and surface morphology on the optical properties of InGaN/GaN quantum wells grown on r-plane sapphire substrates.
Badcock TJ, Hao R, Moram MA, Kappers MJ, Dawson P and Humphreys CJ. *Japanese Journal of Applied Physics vol. 50, (8 PART 1).*

Atom probe tomography assessment of the impact of electron beam exposure on InxGa1-xN/GaN quantum wells.
Bennett SE, Saxey DW, Kappers MJ, Barnard JS, Humphreys CJ, Smith GDW and Oliver RA. *Applied Physics Letters vol. 99, (2).*

The effect of indium concentration on the optical properties of a-plane InGaN/GaN quantum wells grown on r-plane sapphire substrates.
Badcock TJ, Hao R, Moram MA, Dawson P, Kappers MJ and Humphreys CJ. *Physica Status Solidi (a) Applications and Materials Science vol. 208, (7) 1529-1531.*

Dislocation climb in c-plane ALN films.
Fu WY, Kappers MJ, Zhang Y, Humphreys CJ and Moram MA. *Applied Physics Express vol. 4, (6).*

Towards predictive modeling of near-edge structures in electron energy-loss spectra of AlN-based ternary alloys.
Holec D, Rachbauer R, Kiener D, Cherns PD, Costa PMFJ, McAleese C, Mayrhofer PH and Humphreys CJ. *Physical Review B - Condensed Matter and Materials Physics vol. 83, (16).*

The effects of Si doping on dislocation movement and tensile stress in GaN films.
Moram MA, Kappers MJ, Massabuau F, Oliver RA and Humphreys CJ. *Journal of Applied Physics vol. 109, (7).*

Carrier localization mechanisms in InxGa1-xN/GaN quantum wells.
Watson-Parris D, Godfrey MJ, Dawson P, Oliver RA, Galtrey MJ, Kappers MJ and Humphreys CJ. *Physical Review B - Condensed Matter and Materials Physics vol. 83, (11).*

Atom probe tomography and transmission electron microscopy of a Mg-doped AlGaN/GaN superlattice.
Bennett SE, Ulfig RM, Clifton PH, Kappers MJ, Barnard JS, Humphreys CJ and Oliver RA. *Ultramicroscopy vol. 111, (3) 207-211.*

The Mystery of the last supper: Reconstructing the final days of Jesus.
Humphreys CJ.

A quantitative model for doping contrast in the scanning electron microscope using calculated potential distributions and Monte Carlo simulations.
Chee AKW, Broom RF, Humphreys CJ and Bosch EGT. *Journal of Applied Physics vol. 109, (1).*

Efficiency measurement of GaN-based quantum well and light-emitting diode structures grown on silicon substrates.
Zhu D, McAleese C, HÃ¤berlen M, Salcianu C, Thrush T, Kappers M, Phillips A, Lane P, Kane M, Wallis D, Martin T, Astles M, Hylton N, Dawson P and Humphreys C. *Journal of Applied Physics vol. 109, (1).*

2010

Dislocation movement in GaN films.
Moram MA, Sadler TC, HÃ¤berlen M, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 97, (26).*

Scanning transmission electron microscopy investigation of the Si(111)/AlN interface grown by metalorganic vapor phase epitaxy.
Radtke G, Couillard M, Botton GA, Zhu D and Humphreys CJ. *Applied Physics Letters vol. 97, (25).*

Inclined dislocation arrays in AlGaN/AlGaN quantum well structures emitting at 290 nm.
Chang TY, Moram MA, McAleese C, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 108, (12).*

The effects of annealing on non-polar (1 1 2? 0) a-plane GaN films.
Hao R, Zhu T, Hberlen M, Chang TY, Kappers MJ, Oliver RA, Humphreys CJ and Moram MA. *Journal of Crystal Growth vol. 312, (23) 3536-3543.*

A direct method for charge collection probability computation using the reciprocity theorem.
Kurniawan O, Tan CC, Ong VKS, Li E and Humphreys CJ. *Ieee Transactions On Electron Devices vol. 57, (10) 2455-2461.*

Electronic and optical properties of nonpolar a-plane GaN quantum wells.
Schulz S, Badcock TJ, Moram MA, Dawson P, Kappers MJ, Humphreys CJ and O'Reilly EP. *Physical Review B - Condensed Matter and Materials Physics vol. 82, (12).*

Microstructural origins of localization in InGaN quantum wells.
Oliver RA, Bennett SE, Zhu T, Beesley DJ, Kappers MJ, Saxey DW, Cerezo A and Humphreys CJ. *Journal of Physics D: Applied Physics vol. 43, (35).*

Low temperature photoluminescence and cathodoluminescence studies of nonpolar GaN grown using epitaxial lateral overgrowth.
HÃ¤berlen M, Badcock TJ, Moram MA, Hollander JL, Kappers MJ, Dawson P, Humphreys CJ and Oliver RA. *Journal of Applied Physics vol. 108, (3).*

Combined structure-factor phase measurement and theoretical calculations for mapping of chemical bonds in GaN.
Jiang B, Zuo JM, Holec D, Humphreys CJ, Spackman M and Spence JCH. *Acta Crystallographica Section a: Foundations of Crystallography vol. 66, (4) 446-450.*

Imaging dislocations in gallium nitride across broad areas using atomic force microscopy.
Bennett SE, Holec D, Kappers MJ, Humphreys CJ and Oliver RA. *Review of Scientific Instruments vol. 81, (6).*

Cavity Enhancement of single quantum dot emission in the blue.
Taylor RA, Jarjour AF, Collins DP, Holmes MJ, Oliver RA, Kappers MJ and Humphreys CJ. *Nanoscale Research Letters vol. 5, (3) 608-612.*

Measuring dislocation densities in nonpolar a-plane GaN films using atomic force microscopy.
Moram MA, Johnston CF, Kappers MJ and Humphreys CJ. *Journal of Physics D: Applied Physics vol. 43, (5).*

Reduction of the dislocation density in HVPE-grown GaN epi-layers by an in situ SiNx treatment.
Ashraf H, Sridhara Rao DV, Gogova D, Siche D, Fornari R, Humphreys CJ and Hageman PR. *Journal of Crystal Growth vol. 312, (4) 595-600.*

Low dislocation density GaN growth on high-temperature AlN buffer layers on (0 0 0 1) sapphire.
Kappers MJ, Moram MA, Sridhara Rao DV, McAleese C and Humphreys CJ. *Journal of Crystal Growth vol. 312, (3) 363-367.*

2009

Structural properties of wurtzitelike ScGaN films grown by NH 3-molecular beam epitaxy.
Moram MA, Zhang Y, Joyce TB, Holec D, Chalker PR, Mayrhofer PH, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 106, (11).*

Scanning capacitance microscopy studies of unintentional doping in epitaxial lateral overgrowth GaN.
Sumner J, Oliver RA, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 106, (10).*

On the origin of threading dislocations in GaN films.
Moram MA, Ghedia CS, Rao DVS, Barnard JS, Zhang Y, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 106, (7).*

Carrier distribution in InGaN/GaN tricolor multiple quantum well light emitting diodes.
Charash R, Maaskant PP, Lewis L, McAleese C, Kappers MJ, Humphreys CJ and Corbett B. *Applied Physics Letters vol. 95, (15).*

The spatial distribution of threading dislocations in gallium nitride films.
Moram MA, Oliver RA, Kappers MJ and Humphreys CJ. *Advanced Materials vol. 21, (38-39) 3941-3944.*

Morphological changes of InGaN epilayers during annealing assessed by spectral analysis of atomic force microscopy images.
Oliver RA, Sumner J, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 106, (5).*

The effects of film surface roughness on x-ray diffraction of nonpolar gallium nitride films.
Moram MA, Johnston CF, Kappers MJ and Humphreys CJ. *Journal of Physics D: Applied Physics vol. 42, (13).*

Lattice distortions in GaN on sapphire using the CBED-HOLZ technique.
Sridhara Rao DV, McLaughlin K, Kappers MJ and Humphreys CJ. *Ultramicroscopy vol. 109, (10) 1250-1255.*

Investigating stacking faults in nonpolar gallium nitride films using X-ray diffraction.
Moram MA, Johnston CF, Kappers MJ and Humphreys CJ. *Physica B: Condensed Matter vol. 404, (16) 2189-2191.*

Highly conductive modulation doped composition graded p -AlGaN/(AlN)/GaN multiheterostructures grown by metalorganic vapor phase epitaxy.
Hertkorn J, Thapa SB, Wunderer T, Scholz F, Wu ZH, Wei QY, Ponce FA, Moram MA, Humphreys CJ, Vierheilig C and Schwarz UT. *Journal of Applied Physics vol. 106, (1).*

Optical polarization anisotropy of a-plane GaN/AlGaN multiple quantum well structures grown on r-plane sapphire substrates.
Badcock TJ, Dawson P, Kappers MJ, McAleese C, Hollander JL, Johnston CF, Sridhara Rao DV, Sanchez AM and Humphreys CJ. *Journal of Applied Physics vol. 105, (12).*

Understanding x-ray diffraction of nonpolar gallium nitride films.
Moram MA, Johnston CF, Hollander JL, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 105, (11).*

Two-photon autocorrelation measurements on a single InGaN/GaN quantum dot.
Collins D, Jarjour A, Hadjipanayi M, Taylor R, Oliver R, Kappers M, Humphreys C and Tahraoui A. *Nanotechnology vol. 20, (24).*

HANSIS software tool for the automated analysis of HOLZ lines.
Holec D, Sridhara Rao DV and Humphreys CJ. *Ultramicroscopy vol. 109, (7) 837-844.*

Defect reduction in nonpolar and semipolar GaN using scandium nitride interlayers.
Moram MA, Johnston CF, Kappers MJ and Humphreys CJ. *Journal of Crystal Growth vol. 311, (12) 3239-3242.*

Assessment of defect reduction methods for nonpolar a-plane GaN grown on r-plane sapphire.
Johnston CF, Kappers MJ, Moram MA, Hollander JL and Humphreys CJ. *Journal of Crystal Growth vol. 311, (12) 3295-3299.*

Defect reduction in (11 2- 2) semipolar GaN grown on m -plane sapphire using ScN interlayers.
Johnston CF, Moram MA, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 94, (16).*

Microstructural evolution of nonpolar (11-20) GaN grown on (1-102) sapphire using a 3D-2D method.
Johnston CF, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 105, (7).*

Growth of ScN epitaxial films by plasma-assisted molecular beam epitaxy.
Hall JL, Moram MA, Sanchez A, Novikov SV, Kent AJ, Foxon CT, Humphreys CJ and Campion RP. *Journal of Crystal Growth vol. 311, (7) 2054-2057.*

Coherent terahertz acoustic vibrations in polar and semipolar gallium nitride-based superlattices.
Moss DM, Akimov AV, Kent AJ, Glavin BA, Kappers MJ, Hollander JL, Moram MA and Humphreys CJ. *Applied Physics Letters vol. 94, (1).*

2008

Electrically driven single InGaN/GaN quantum dot emission.
Jarjour AF, Taylor RA, Oliver RA, Kappers MJ, Humphreys CJ and Tahraoui A. *Applied Physics Letters vol. 93, (23).*

Equilibrium critical thickness for misfit dislocations in III-nitrides.
Holec D, Zhang Y, Rao DVS, Kappers MJ, McAleese C and Humphreys CJ. *Journal of Applied Physics vol. 104, (12).*

The effect of oxygen incorporation in sputtered scandium nitride films.
Moram MA, Barber ZH and Humphreys CJ. *Thin Solid Films vol. 516, (23) 8569-8572.*

Optical properties of GaN/AlGaN quantum wells grown on nonpolar substrates.
Badcock TJ, Dawson P, Kappers MJ, McAleese C, Hollander JL, Johnston CF, Rao DVS, Sanchez AM and Humphreys CJ. *Applied Physics Letters vol. 93, (10).*

Observation of long-range compositional fluctuations in glasses: Implications for atomic and electronic structure.
Jiang N, Qiu J, Humphreys CJ and Spence JCH. *Micron vol. 39, (6) 698-702.*

Electron energy loss near edge structure (ELNES) spectra of AlN and AlGaN: A theoretical study using the Wien2k and Telnes programs.
Holec D, Costa PMFJ, Cherns PD and Humphreys CJ. *Micron vol. 39, (6) 690-697.*

Three-dimensional atom probe analysis of green- and blue-emitting In x Ga1-x NGaN multiple quantum well structures.
Galtrey MJ, Oliver RA, Kappers MJ, Humphreys CJ, Clifton PH, Larson D, Saxey DW and Cerezo A. *Journal of Applied Physics vol. 104, (1).*

Insights into the growth mechanism of InxGa1-xN epitaxial nanostructures formed using a silane predose.
Oliver RA, Van der Laak NK, Kappers MJ and Humphreys CJ. *Journal of Crystal Growth vol. 310, (15) 3459-3465.*

High resolution transmission electron microscopy and three-dimensional atom probe microscopy as complementary techniques for the high spatial resolution analysis of GaN based quantum well systems.
Oliver RA, Galtrey MJ and Humphreys CJ. *Materials Science and Technology vol. 24, (6) 675-681.*

The effect of wafer curvature on x-ray rocking curves from gallium nitride films.
Moram MA, Vickers ME, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 103, (9).*

Growth of epitaxial thin films of scandium nitride on 100-oriented silicon.
Moram MA, Novikov SV, Kent AJ, Nörenberg C, Foxon CT and Humphreys CJ. *Journal of Crystal Growth vol. 310, (11) 2746-2750.*

Degradation of InGaNGaN laser diodes analyzed by microphotoluminescence and microelectroluminescence mappings.
Rossetti M, Smeeton TM, Tan WS, Kauer M, Hooper SE, Heffernan J, Xiu H and Humphreys CJ. *Applied Physics Letters vol. 92, (15).*

Assessment of the performance of scanning capacitance microscopy for n -type gallium nitride.
Sumner J, Oliver RA, Kappers MJ and Humphreys CJ. *Journal of Vacuum Science and Technology B: Microelectronics and Nanometer Structures vol. 26, (2) 611-617.*

Improvements in a -plane GaN crystal quality by a two-step growth process.
Hollander JL, Kappers MJ, McAleese C and Humphreys CJ. *Applied Physics Letters vol. 92, (10).*

Controlled integration of nanocrystals in inverted hexagonal nano-pits at the surface of light-emitting heterostructures.
De Sousa Pereira SM, Martins MA, Trindade T, Watson IM, Zhu D and Humphreys CJ. *Advanced Materials vol. 20, (5) 1038-1043.*

Compositional inhomogeneity of a high-efficiency Inx Ga1-x N based multiple quantum well ultraviolet emitter studied by three dimensional atom probe.
Galtrey MJ, Oliver RA, Kappers MJ, McAleese C, Zhu D, Humphreys CJ, Clifton PH, Larson D and Cerezo A. *Applied Physics Letters vol. 92, (4).*

Degradation of GaN-based quantum well light-emitting diodes.
Zhao LX, Thrush EJ, Humphreys CJ and Phillips WA. *Journal of Applied Physics vol. 103, (2).*

The role of strain in controlling the surface morphology of Al x Ga 1-x N following in situ treatment with SiH 4 and NH 3.
Ketteniss N, Oliver RA, McAleese C, Kappers MJ, Zhang Y and Humphreys CJ. *Applied Surface Science vol. 254, (7) 2124-2130.*

Solid-state lighting.
Humphreys CJ. *Mrs Bulletin vol. 33, (4) 459-470.*

2007

Deep electronic states associated with a metastable hole trap in n-type GaN.
Emiroglu D, Evans-Freeman JH, Kappers MJ, McAleese C and Humphreys CJ. *Physica B: Condensed Matter vol. 401-402, 311-314.*

Atom probe tomography today.
Cerezo A, Clifton PH, Galtrey MJ, Humphreys CJ, Kelly TF, Larson DJ, Lozano-Perez S, Marquis EA, Oliver RA, Sha G, Thompson K, Zandbergen M and Alvis RL. *Materials Today vol. 10, (12) 36-42.*

Control of the oscillator strength of the exciton in a single InGaN-GaN quantum dot.
Jarjour AF, Oliver RA, Tahraoui A, Kappers MJ, Humphreys CJ and Taylor RA. *Physical Review Letters vol. 99, (19).*

Excitation energy dependence of the photoluminescence spectrum of an Inx Ga1-x N/GaN single quantum well structure.
Hylton NP, Dawson P, Kappers MJ, McAleese C and Humphreys CJ. *Physical Review B - Condensed Matter and Materials Physics vol. 76, (20).*

Response to comment on 'Three-dimensional atom probe studies of an Inx Ga1-x NGaN multiple quantum well structure: Assessment of possible indium clustering' [Appl. Phys. Lett. 91, 176101 (2007)].
Galtrey MJ, Oliver RA, Kappers MJ, Humphreys CJ, Clifton PH, Cerezo A and Smith GDW. *Applied Physics Letters vol. 91, (17).*

Dislocation reduction in gallium nitride films using scandium nitride interlayers.
Moram MA, Zhang Y, Kappers MJ, Barber ZH and Humphreys CJ. *Applied Physics Letters vol. 91, (15).*

Growth of dislocation-free GaN islands on Si(111) using a scandium nitride buffer layer.
Moram MA, Kappers MJ, Joyce TB, Chalker PR, Barber ZH and Humphreys CJ. *Journal of Crystal Growth vol. 308, (2) 302-308.*

Growth of dislocation-free GaN islands on Si(1 1 1) using a scandium nitride buffer layer.
Moram MA, Kappers MJ, Joyce TB, Chalker PR, Barber ZH and Humphreys CJ. *Journal of Crystal Growth vol. 308, (2) 302-308.*

Misoriented domains in (0001)-GaN/(111)-Ge grown by molecular beam epitaxy.
Zhang Y, McAleese C, Xiu H, Humphreys CJ, Lieten RR, Degroote B and Borghs G. *Applied Physics Letters vol. 91, (9).*

Cavity-enhanced blue single-photon emission from a single InGaNGaN quantum dot.
Jarjour AF, Taylor RA, Oliver RA, Kappers MJ, Humphreys CJ and Tahraoui A. *Applied Physics Letters vol. 91, (5).*

Accurate experimental determination of the Poisson's ratio of GaN using high-resolution x-ray diffraction.
Moram MA, Barber ZH and Humphreys CJ. *Journal of Applied Physics vol. 102, (2).*

Characterization of InGaN quantum wells with gross fluctuations in width.
Van Der Laak NK, Oliver RA, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 102, (1).*

Does In form In-rich clusters in InGaN quantum wells?.
Humphreys CJ. *Philosophical Magazine vol. 87, (13) 1971-1982.*

Atom probe provides evidence to question InGaN cluster theory.
Galtrey M, Oliver R and Humphreys C. *Compound Semiconductor vol. 13, (4) 27-30.*

Low-voltage cross-sectional EBIC for characterisation of GaN-based light emitting devices.
Moldovan G, Kazemian P, Edwards PR, Ong VKS, Kurniawan O and Humphreys CJ. *Ultramicroscopy vol. 107, (4-5) 382-389.*

Role of gross well-width fluctuations in bright, green-emitting single InGaNGaN quantum well structures.
Van Der Laak NK, Oliver RA, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 90, (12).*

High photoluminescence quantum efficiency InGaN multiple quantum well structures emitting at 380 nm.
Graham DM, Dawson P, Chabrol GR, Hylton NP, Zhu D, Kappers MJ, McAleese C and Humphreys CJ. *Journal of Applied Physics vol. 101, (3).*

Three-dimensional atom probe studies of an InxGa 1-xN/GaN multiple quantum well structure: Assessment of possible indium clustering.
Galtrey MJ, Oliver RA, Kappers MJ, Humphreys CJ, Stokes DJ, Clifton PH and Cerezo A. *Applied Physics Letters vol. 90, (6).*

Compositional contrast in Al x Ga 1-x N/GaN heterostructures using scanning spreading resistance microscopy.
Fraser IS, Oliver RA, Sumner J, McAleese C, Kappers MJ and Humphreys CJ. *Applied Surface Science vol. 253, (8) 3937-3944.*

Quantitative secondary electron energy filtering in a scanning electron microscope and its applications.
Kazemian P, Mentink SAM, Rodenburg C and Humphreys CJ. *Ultramicroscopy vol. 107, (2-3) 140-150.*

Anisotropic strain relaxation in a-plane GaN quantum dots.
Founta S, Coraux J, Jalabert D, Bougerol C, Rol F, Mariette H, Renevier H, Daudin B, Oliver RA, Humphreys CJ, Noakes TCQ and Balley P. *Journal of Applied Physics vol. 101, (6).*

2006

Resonant excitation photoluminescence studies of InGaN/GaN single quantum well structures.
Graham DM, Dawson P, Godfrey MJ, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 89, (21).*

A method of accurately determining the positions of the edges of depletion regions in semiconductor junctions.
Ong VKS, Kurniawan O, Moldovan G and Humphreys CJ. *Journal of Applied Physics vol. 100, (11).*

Microstructure of epitaxial scandium nitride films grown on silicon.
Moram MA, Joyce TB, Chalker PR, Barber ZH and Humphreys CJ. *Applied Surface Science vol. 252, (24) 8385-8387.*

Imaging dislocation cores - The way forward.
Spence JCH, Kolar HR, Hembree G, Humphreys CJ, Barnard J, Datta R, Koch C, Ross FM and Justo JF. *Philosophical Magazine vol. 86, (29-31) 4781-4796.*

High resolution quantitative two-dimensional dopant mapping using energy-filtered secondary electron imaging.
Kazemian P, Mentink SAM, Rodenburg C and Humphreys CJ. *Journal of Applied Physics vol. 100, (5).*

Young's modulus, Poisson's ratio, and residual stress and strain in (111)-oriented scandium nitride thin films on silicon.
Moram MA, Barber ZH, Humphreys CJ, Joyce TB and Chalker PR. *Journal of Applied Physics vol. 100, (2).*

Insights into the origin of threading dislocations in GaN/Al 2O3 from atomic force microscopy.
Oliver RA, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 89, (1).*

Effects of KOH etching on the properties of Ga-polar n-GaN surfaces.
Moldovan G, Roe MJ, Harrison I, Kappers M, Humphreys CJ and Brown PD. *Philosophical Magazine vol. 86, (16) 2315-2327.*

Site-specific dopant profiling in a scanning electron microscope using focused ion beam prepared specimens.
Kazemian P, Twitchett AC, Humphreys CJ and Rodenburg C. *Applied Physics Letters vol. 88, (21).*

A comparative study of near-UV emitting InGaN quantum wells with AlGaN and AlInGaN barriers.
Zhu D, Kappers MJ, Costa PMFJ, McAleese C, Rayment FDG, Chabrol GR, Graham DM, Dawson P, Thrush EJ, Mullins JT and Humphreys CJ. *Physica Status Solidi (a) Applications and Materials Science vol. 203, (7) 1819-1823.*

Two-photon absorption from single InGaN/GaN quantum dots.
Jarjour AF, Green AM, Parker TJ, Taylor RA, Oliver RA, Andrew G, Kappers MJ, Humphreys CJ, Martin RW and Watson IM. *Physica E: Low-Dimensional Systems and Nanostructures vol. 32, (1-2 SPEC. ISS.) 119-122.*

Highlighting threading dislocations in MOVPE-grown GaN using an in situ treatment with SiH4 and NH3.
Oliver RA, Kappers MJ, Sumner J, Datta R and Humphreys CJ. *Journal of Crystal Growth vol. 289, (2) 506-514.*

2005

Determination of relative internal quantum efficiency in InGaNGaN quantum wells.
Martinez CE, Stanton NM, Kent AJ, Graham DM, Dawson P, Kappers MJ and Humphreys CJ. *Journal of Applied Physics vol. 98, (5).*

Quantum-confined Stark effect in a single InGaN quantum dot under a lateral electric field.
Robinson JW, Rice JH, Lee KH, Na JH, Taylor RA, Hasko DG, Oliver RA, Kappers MJ, Humphreys CJ and Briggs GAD. *Applied Physics Letters vol. 86, (21) 1-3.*

Optical and microstructural studies of InGaNGaN single-quantum-well structures.
Graham DM, Soltani-Vala A, Dawson P, Godfrey MJ, Smeeton TM, Barnard JS, Kappers MJ, Humphreys CJ and Thrush EJ. *Journal of Applied Physics vol. 97, (10).*

Determining the site occupancy of Ru in the L12 phase of a Ni-base superalloy using ALCHEMI.
Ofori AP, Rossouw CJ and Humphreys CJ. *Acta Materialia vol. 53, (1) 97-110.*

Growth modes in heteroepitaxy of InGaN on GaN.
Oliver RA, Kappers MJ, Humphreys CJ and Briggs GAD. *Journal of Applied Physics vol. 97, (1).*

2004

Broadband sensitization of 1.53 ?m Er3+ luminescence in erbium-implanted alumina.
Chryssou CE, Kenyon AJ, Smeeton TM, Humphreys CJ and Hole DE. *Applied Physics Letters vol. 85, (22) 5200-5202.*

Revealing all types of threading dislocations in GaN with improved contrast in a single plan view image.
Datta R, Kappers MJ, Barnard JS and Humphreys CJ. *Applied Physics Letters vol. 85, (16) 3411-3413.*

Improving thermal stability of LiMn2O4 thin films by in situ coating of ?-MnO2 using high-pressure and high-temperature sputtering.
Chen GS, Chen GS, Hsiao HH, Louh RF and Humphreys CJ. *Electrochemical and Solid-State Letters vol. 7, (8).*

Photoluminescence studies of exciton recombination and dephasing in single InGaN quantum dots.
Rice JH, Robinson JW, Smith JD, Jarjour A, Taylor RA, Oliver RA, Briggs GAD, Kappers MJ, Yasin S and Humphreys CJ. *Ieee Transactions On Nanotechnology vol. 3, (3) 343-347.*

Temporal variation in photoluminescence from single InGaN quantum dots.
Rice JH, Robinson JW, Jarjour A, Taylor RA, Oliver RA, Andrew G, Briggs D, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 84, (20) 4110-4112.*

Application of the Taguchi method for assessment of surface treatment procedures for Ti/n-type GaN contacts.
Moldovan G, Harrison I, Humphreys CJ, Kappers M and Brown PD. *Materials Science and Technology vol. 20, (4) 533-538.*

Mapping the potential within a nanoscale undoped GaAs region using a scanning electron microscope.
Kaestner B, Schönjahn C and Humphreys CJ. *Applied Physics Letters vol. 84, (12) 2109-2111.*

Electrophoretic manipulation of single DNA molecules in nanofabricated capillaries.
Campbell LC, Wilkinson MJ, Manz A, Camilleri P and Humphreys CJ. *Lab On a Chip vol. 4, (3) 225-229.*

Can a Materials Scientist Move Mount Sinai?.
Humphreys C. *Mrs Bulletin vol. 29, (4) 222-223.*

2003

Electron-beam-induced strain within InGaN quantum wells: False indium cluster detection in the transmission electron microscope.
Smeeton TM, Kappers MJ, Barnard JS, Vickers ME and Humphreys CJ. *Applied Physics Letters vol. 83, (26) 5419-5421.*

Comment on AIN/GaN double-barrier resonant tunneling diodes grown by rf-plasma-assisted molecular-beam epitaxy [Appl. Phys. Lett. 81, 1729 (2002)].
Belyaev AE, Foxon CT, Novikov SV, Makarovsky O, Eaves L, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 83, (17) 3626-3627.*

Time-resolved dynamics in single InGaN quantum dots.
Robinson JW, Rice JH, Jarjour A, Smith JD, Taylor RA, Oliver RA, Briggs GAD, Kappers MJ, Humphreys CJ and Arakawa Y. *Applied Physics Letters vol. 83, (13) 2674-2676.*

Blue emission from As-doped GaN films grown by molecular beam epitaxy on GaN templates.
Novikov SV, Zhao LX, Winser AJ, Kappers MJ, Barnard JS, Harrison I, Humphreys CJ and Foxon CT. *Journal of Crystal Growth vol. 256, (3-4) 237-242.*

Determination of the indium content and layer thicknesses in InGaN/GaN quantum wells by x-ray scattering.
Vickers ME, Kappers MJ, Smeeton TM, Thrush EJ, Barnard JS and Humphreys CJ. *Journal of Applied Physics vol. 94, (3) 1565-1574.*

InGaN quantum dots grown by metalorganic vapor phase epitaxy employing a post-growth nitrogen anneal.
Oliver RA, Briggs GAD, Kappers MJ, Humphreys CJ, Yasin S, Rice JH, Smith JD and Taylor RA. *Applied Physics Letters vol. 83, (4) 755-757.*

Optimizing and quantifying dopant mapping using a scanning electron microscope with a through-the-lens detector.
Schönjahn C, Broom RF, Humphreys CJ, Howie A and Mentink SAM. *Applied Physics Letters vol. 83, (2) 293-295.*

Detailed interpretation of electron transport in n-GaN.
Mavroidis C, Harris JJ, Kappers MJ, Humphreys CJ and Bougrioua Z. *Journal of Applied Physics vol. 93, (11) 9095-9103.*

Carrier leakage in InGaN quantum well light-emitting diodes emitting at 480 nm.
Pope IA, Smowton PM, Blood P, Thomson JD, Kappers MJ and Humphreys CJ. *Applied Physics Letters vol. 82, (17) 2755-2757.*

2002

Energy-filtered imaging in a field-emission scanning electron microscope for dopant mapping in semiconductors.
Schönjahn C, Humphreys CJ and Glick M. *Journal of Applied Physics vol. 92, (12) 7667-7671.*

Response to comment on 'Effect of growth interruptions on the light emission and indium clustering of InGaN/GaN multiple quantum wells' [Appl. Phys. Lett. 81, 3100 (2002)].
Cho HK, Lee JY, Sharma N, Humphreys CJ, Yang GM, Kim CS, Song JH and Yu PW. *Applied Physics Letters vol. 81, (16) 3102-3103.*

Electronic structure of GaN and InxGa1-xN measured with electron energy-loss spectroscopy.
Keast VJ, Scott AJ, Kappers MJ, Foxon CT and Humphreys CJ. *Physical Review B - Condensed Matter and Materials Physics vol. 66, (12) 1253191-1253197.*

Dopant profiling with the scanning electron microscope - A study of Si.
Elliott SL, Broom RF and Humphreys CJ. *Journal of Applied Physics vol. 91, (11) 9116-9122.*

Crystallization transformations in vacuum-deposited amorphous aluminum fluoride self-developing thin-film resists induced by electron-beam irradiation.
Chen GS, Lee PY, Boothroyd CB and Humphreys CJ. *Journal of Vacuum Science and Technology, Part a: Vacuum, Surfaces and Films vol. 20, (3) 986-990.*

Luminescence from erbium-doped silicon nanocrystals in silica: Excitation mechanisms.
Kenyon AJ, Chryssou CE, Pitt CW, Shimizu-Iwayama T, Hole DE, Sharma N and Humphreys CJ. *Journal of Applied Physics vol. 91, (1) 367-374.*

Colin Humphreys - A practical physicist having fun in the world of materials.
Thomas SM and Humphreys C. *Materials World vol. 10, (1) 11-11.*

2001

Analysis of contacts and V-defects in GaN device structures by transmission electron microscopy.
Bright AN, Sharma N and Humphreys CJ. *Journal of Electron Microscopy vol. 50, (6) 489-495.*

Identification of interfacial layers in Ohmic contacts to n-type GaN and AlxGa1-xN/GaN heterostructures using high-resolution electron microscopy.
Bright AN and Humphreys CJ. *Philosophical Magazine B: Physics of Condensed Matter; Statistical Mechanics, Electronic, Optical and Magnetic Properties vol. 81, (11) 1725-1744.*

Microstructural characterization of InGaN/GaN multiple quantum wells with high indium composition.
Cho HK, Lee JY, Kim CS, Yang GM, Sharma N and Humphreys C. *Journal of Crystal Growth vol. 231, (4) 466-473.*

Effect of growth interruptions on the light emission and indium clustering of InGaN/GaN multiple quantum wells.
Cho HK, Lee JY, Sharma N, Humphreys CJ, Yang GM, Kim CS, Song JH and Yu PW. *Applied Physics Letters vol. 79, (16) 2594-2596.*

Chemical mapping of InGaN MQWs.
Sharma N, Tricker D, Thomas P, Bougrioua Z, Jacobs K, Cheyns J, Moerman I, Thrush T, Considine L, Boyd A and Humphreys C. *Journal of Crystal Growth vol. 230, (3-4) 438-441.*

Observation of thermally activated conduction at a GaN-sapphire interface.
Mavroidis C, Harris JJ, Kappers MJ, Sharma N, Humphreys CJ and Thrush EJ. *Applied Physics Letters vol. 79, (8) 1121-1123.*

Effects of electron-beam exposure on a ruthenium nanocluster polymer.
Thomas MDR, Ahmed H, Sanderson KM, Shephard DS, Johnson BFG, Ozkaya D, Sharma N and Humphreys C. *Journal of Applied Physics vol. 90, (2) 947-952.*

Local symmetry and bonding effects on electron energy-loss near-edge structures: Ab initio study of an NiAl grain boundary.
Pankhurst DA, Botton GA and Humphreys CJ. *Physical Review B - Condensed Matter and Materials Physics vol. 63, (20).*

Broad-band and flashlamp pumping of 1.53 ?m emission from erbium-doped silicon nanocrystals.
Kenyon AJ, Chryssou CE, Pitt CW, Shimizu-Iwayama T, Hole DE, Sharma N and Humphreys CJ. *Materials Science and Engineering B: Solid-State Materials For Advanced Technology vol. 81, (1-3) 19-22.*

Correlation of contact resistance with microstructure for Au/Ni/Al/Ti/AlGaN/GaN ohmic contacts using transmission electron microscopy.
Bright AN, Thomas PJ, Weyland M, Tricker DM, Humphreys CJ and Davies R. *Journal of Applied Physics vol. 89, (6) 3143-3150.*

Microstructure of semiconducting MnSi1.7 and ?-FeSi2 layers grown by surfactant-mediated reactive deposition epitaxy.
Tatsuoka H, Koga T, Matsuda K, Nose Y, Souno Y, Kuwabara H, Brown PD and Humphreys CJ. *Thin Solid Films vol. 381, (2) 231-235.*

A transmission electron microscopy study of microstructure evolution with increasing anneal temperature in Ti/Al ohmic contacts to n-GaN.
Bright AN, Tricker DM, Humphreys CJ and Davies R. *Journal of Electronic Materials vol. 30, (3) L13-L16.*

Material optimisation for AlGaN/GaN HFET applications.
Bougrioua Z, Moerman I, Sharma N, Wallis RH, Cheyns J, Jacobs K, Thrush EJ, Considine L, Beanland R, Farvacque JL and Humphreys C. *Journal of Crystal Growth vol. 230, (3-4) 573-578.*

Chemical mapping of indium rich quantum dots in InGaN/GaN quantum wells.
Sharma N, Cho HK, Lee JY and Humphreys CJ. *Materials Research Society Symposium - Proceedings vol. 667, G671-G676.*

2000

Comparative study of sputtered and spin-coatable aluminum oxide electron beam resists.
Saifullah MSM, Kurihara K and Humphreys CJ. *Journal of Vacuum Science and Technology B: Microelectronics and Nanometer Structures vol. 18, (6) 2737-2744.*

Chemical mapping and formation of V-defects in InGaN multiple quantum wells.
Sharma N, Thomas P, Tricker D and Humphreys C. *Applied Physics Letters vol. 77, (9) 1274-1276.*

Facing up to the future of materials science and technology.
Humphreys C. *Materials World vol. 8, (4) 11-13.*

Effect of annealing on the microstructure and tensile properties of a ?/?? Ni-Al-Fe alloy.
Pekarskaya E, Botton GA, Jones CN and Humphreys CJ. *Intermetallics vol. 8, (8) 903-913.*

Oxbridge and the public schools.
Humphreys C. *Materials World vol. 8, (1) 2-3.*

Microstructural evolution and stability of (Fe1-xVx)3Al alloys in relation to the electronic structure.
Botton GA, Nishino Y and Humphreys CJ. *Intermetallics vol. 8, (9-11) 1209-1214.*

1999

Electronic structure, charge transfer and bonding in intermetallics using EELS and density functional theory.
Humphreys CJ, Botton GA, Pankhurst DA, Keast VJ and Temmerman WM. *Materials Research Society Symposium - Proceedings vol. 552,.*

Comparative study of the microstructure and tensile properties of Ni-Al alloys with Fe and Cr additions.
Pekarskaya E, Jones CN and Humphreys CJ. *Materials Research Society Symposium - Proceedings vol. 552,.*

Study of sample thickness dependence in electron-beam irradiation of self-developing inorganic materials.
Chen GS and Humphreys CJ. *Journal of Applied Physics vol. 85, (1) 148-152.*

Physical chemistry: Electrons seen in orbit.
Humphreys CJ. *Nature vol. 401, (6748) 21-22.*

Electron energy loss spectroscopy studies of the amorphous to crystalline transition in FeF3.
Saifullah MSM, Botton GA, Boothroyd CB and Humphreys CJ. *Journal of Applied Physics vol. 86, (5) 2499-2504.*

Transmission electron microscopy investigation of SiC films grown on SiC substrates by solid-source molecular beam epitaxy.
Kaiser U, Khodos I, Brown PD, Chuvilin A, Albrecht M, Humphreys CJ, Fissel A and Richter W. *Journal of Materials Research vol. 14, (8) 3226-3236.*

A two-phase charge-density real-space-pairing model of high-Tc superconductivity.
Humphreys CJ. *Acta Crystallogr A vol. 55, (Pt 2 Pt 1) 228-233.*

A two-phase charge-density real-space-pairing model of high-Tc superconductivity.
Humphreys CJ. *Acta Crystallographica Section a: Foundations of Crystallography vol. 55, (2 PART I) 228-233.*

Quantitative analysis of ultrathin doping layers in semiconductors using high-angle annular dark field images.
Liu CP, Preston AR, Boothroyd CB and Humphreys CJ. *Journal of Microscopy vol. 194, (1) 171-182.*

Energy-filtered transmission electron microscopy of multilayers in semiconductors.
Liu CP, Boothroyd CB and Humphreys CJ. *Journal of Microscopy vol. 194, (1) 58-70.*

A quantitative study of compositional profiles of chemical vapour-deposited strained silicon-germanium/silicon layers by transmission electron microscopy.
Walther T and Humphreys CJ. *Journal of Crystal Growth vol. 197, (1-2) 113-128.*

Structure and climb of faulted dipoles in GaAs.
Yonenaga I, Lim SH, Shindo D, Brown PD and Humphreys CJ. *Physica Status Solidi (a) Applied Research vol. 171, (1) 53-57.*

Electronic and structural properties of partially crystallized silicon produced by solid-phase crystallization of as-deposited amorphous silicon.
Smith JP, Eccleston W, Brown PD and Humphreys CJ. *Journal of The Electrochemical Society vol. 146, (1) 306-312.*

Effect of growth condition on the structure of 2H - AlN films deposited on Si(111) by plasma-assisted molecular beam epitaxy.
Kaiser U, Brown PD, Khodos I, Humphreys CJ, Schenk HPD and Richter W. *Journal of Materials Research vol. 14, (5) 2036-2042.*

Morphological and structural characteristics of homoepitaxial GaN grown by metalorganic chemical vapour deposition (MOCVD).
Weyher JL, Brown PD, Zauner ARA, Müller S, Boothroyd CB, Foord DT, Hageman PR, Humphreys CJ, Larsen PK, Grzegory I and Porowski S. *Journal of Crystal Growth vol. 204, (4) 419-428.*

1998

Stuff of dreams.
Humphreys C. *New Scientist vol. 157, (2126) 44-45.*

High-quality epitaxial MnSi(111) layers grown in the presence of an Sb flux.
Matsuda K, Tatsuoka H, Matsunaga K, Isaji K, Kuwabara H, Brown PD, Xin Y, Dunin-Borkowski R and Humphreys CJ. *Japanese Journal of Applied Physics Part 1-Regular Papers Brief Communications & Review Papers vol. 37, (12A) 6556-6561.*

Microwave dielectric properties of (Y2-xRx)BaCuO5 (R = rare-earth) solid solutions.
Ogawa H, Watanabe M, Ohsato H and Humphreys C. *Ieee International Symposium On Applications of Ferroelectrics 517-520.*

Climb of dislocations in GaAs by irradiation.
Yonenaga I, Brown PD and Humphreys CJ. *Materials Science and Engineering A vol. 253, (1-2) 148-150.*

Microwave dielectric properties of Y2Ba(Cu1-xZnx)O5 solid solutions.
Watanabe M, Ogawa H, Ohsato H and Humphreys C. *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers vol. 37, (9 PART B) 5360-5363.*

Shaping the future of materials science.
Humphreys C. *Materials World vol. 6, (6) 352-355.*

Interfacial reaction and defect microstructure of epitaxial MnSb/Si(111) grown by hot-wall epitaxy.
Tatsuoka H, Isaji K, Sugiura K, Kuwabara H, Brown PD, Xin Y and Humphreys CJ. *Journal of Applied Physics vol. 83, (10) 5504-5508.*

Electron-energy-loss spectra and the structural stability of nickel oxide: An LSDA+U study.
Dudarev SL, Botton GA, Savrasov SY, Humphreys CJ and Sutton AP. *Physical Review B vol. 57, (3) 1505-1509.*

Electron-beam-induced damage in amorphous SiO2 and the direct fabrication of silicon nanostructures.
Chen GS, Boothroyd CB and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 78, (2) 491-506.*

High-quality epitaxial MnSi(111) layers grown in the presence of an Sb flux.
Matsuda K, Tatsuoka H, Matsunaga K, Isaji K, Kuwabara H, Brown PD, Xin Y, Dunin-Borkowski R and Humphreys CJ. *Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers vol. 37, (12) 6556-6561.*

Effect of molybdenum substitution on phase stability and high-temperature strength of Fe3Al alloys.
Nishino Y, Inkson BJ, Ogawa T and Humphreys CJ. *Philosophical Magazine Letters vol. 78, (2) 97-103.*

Atomic arrangement of a Z-shape faulted dipole within deformed GaAs.
Lim SH, Shindo D, Yonenaga I, Brown PD and Humphreys CJ. *Physical Review Letters vol. 81, (24) 5350-5353.*

1997

Investigation of the proximity effect in amorphous AlF3 electron-beam resists.
Chen GS and Humphreys CJ. *Journal of Vacuum Science and Technology B: Microelectronics and Nanometer Structures vol. 15, (6) 1954-1960.*

Observation of vertical and lateral Ge segregation in thin undulating SiGe layers on Si by electron energy-loss spectroscopy.
Walther T, Humphreys CJ and Cullis AG. *Applied Physics Letters vol. 71, (6) 809-811.*

Analysis of EELS near edge structures to study the bonding character in intermetallic alloys.
Botton GA and Humphreys CJ. *Micron vol. 28, (4) 313-319.*

Characterization of ultrathin doping layers in semiconductors.
Liu CP, Dunin-Borkowski RE, Boothroyd CB, Brown PD and Humphreys CJ. *Microscopy and Microanalysis vol. 3, (4) 352-363.*

Domain boundaries in epitaxial wurtzite GaN.
Xin Y, Brown PD, Humphreys CJ, Cheng TS and Foxon CT. *Applied Physics Letters vol. 70, (10) 1308-1310.*

Microstructural characterisation of GaN(As) films grown on (001) GaP by molecular beam epitaxy.
Xin Y, Brown PD, Dunin-Borkowski RE, Humphreys CJ, Cheng TS and Foxon CT. *Journal of Crystal Growth vol. 171, (3-4) 321-332.*

Microstructural and electron spectroscopic characterization of carbon nanostructures and nanotubes produced using multimetal catalysts.
Botton GA, Burnell G, Humphreys CJ, Yadav T and Withers JC. *Journal of Physics and Chemistry of Solids vol. 58, (7) 1091-1102.*

Determining directly from experiment the magnitude of the burgers vector of glissile ?c?-component dislocations in Ti3Al.
Wiezorek JMK, Humphreys CJ and Fraser HL. *Philosophical Magazine Letters vol. 75, (5) 281-289.*

1996

Scanning transmission electron beam induced conductivity investigation of a Si/Si1-xGex/Si heterostructure.
Brown PD and Humphreys CJ. *Journal of Applied Physics vol. 80, (4) 2527-2529.*

Missed opportunities for high-temperature superconductivity.
Humphreys C. *Physics World vol. 9, (8) 15-15.*

Experimental and theoretical study of the electronic structure of Fe, Co, and Ni aluminides with the B2 structure.
Botton GA, Guo GY, Temmerman WM and Humphreys CJ. *Phys Rev B Condens Matter vol. 54, (3) 1682-1691.*

Electron-beam induced crystallization transition in self-developing amorphous AIF3 resists.
Chen GS, Boothroyd CB and Humphreys CJ. *Applied Physics Letters vol. 69, (2) 170-172.*

The symmetry of three-beam scattering equations: Inversion of three-beam diffraction patterns from centrosymmetric crystals.
Moodie AF, Etheridge J and Humphreys CJ. *Acta Crystallographica Section a: Foundations of Crystallography vol. 52, (4) 596-605.*

Effect of a doping impurity on the formation of structural defects in CdTe irradiated by electrons and ions.
Loginov YY, Brown PD and Humphreys CJ. *Physics of The Solid State vol. 38, (4) 692-697.*

Formation of structural defects in CdTe and CdZnTe heteroepitaxial layers grown on GaAs.
Loginov YY, Brown PD and Humphreys CJ. *Physics of The Solid State vol. 38, (2) 272-277.*

High-resolution electron microscopy study of the junction between a coherent (111) and an incoherent (121) twin boundary in TiAl.
Inkson BJ and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 73, (6) 1647-1661.*

Inkson BJ and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 73, (5) 1333-1345.*

Atom positions in the R-phase unit cell in TiNi shape memory alloy.
Chen Q, Knowles KM, Humphreys CJ and Wu XF. *Journal of Materials Science vol. 31, (16) 4227-4231.*

Defect Formation in ZnTe and (Cd,Zn)Te Epitaxial Layers Grown on (001) GaAs.
Loginov YY, Brown PD and Humphreys CJ. *Inorganic Materials vol. 32, (1) 22-25.*

Growth of GaN films on (0 0 1) and (1 1 1) GaAs surfaces by a modified MBE method.
Cheng TS, Foxon CT, Jeffs NJ, Hughes OH, Ren BG, Xin Y, Brown PD, Humphreys CJ, Andranov AV, Lacklison DE, Orton JW and Halliwell M. *Mrs Internet Journal of Nitride Semiconductor Research vol. 1,.*

1995

Correlation between compositional fluctuations and surface undulations in strained layer epitaxy.
Walther T, Humphreys CJ, Cullis AG and Robbins DJ. *Materials Science Forum vol. 196-201, (pt 1) 505-510.*

The microstructure of MnSb grown on (001) GaAs by hot wall epitaxy.
Xin Y, Brown PD, Boothroyd CB, Humphreys CJ, Tatsuoka H, Kuwabara H, Oshita M, Nakamura T, Fujiyasu H and Nakanishi Y. *Journal of Crystal Growth vol. 156, (3) 155-162.*

On the hierarchy of planar fault energies in TiAl.
Wiezorek JMK and Humphreys CJ. *Scripta Metallurgica Et Materiala vol. 33, (3) 451-458.*

HREM studies of the (001) surface of YBa2Cu4O8.
Xin Y, Zhou W and Humphreys CJ. *Physica C: Superconductivity and Its Applications vol. 249, (3-4) 319-332.*

A FRAMEWORK FOR THE FUTURE.
CAMPBELL J and HUMPHREYS C. *Materials World vol. 3, (6) 286-287.*

On the dissociation of prism plane superdislocations in ti3al.
Wiezorek JM, Court SA and Humphreys CJ. *Philosophical Magazine Letters vol. 72, (6) 393-403.*

Detection of random alloy fluctuations in high-resolution transmission electron micrographs of AlGaAs.
Walther T, Humphreys CJ, Grimshaw MP and Churchill AC. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 72, (4) 1015-1030.*

Microtwin nucleation and propagation in heteroepitaxial II-VI compounds on (001)-oriented GaAs substrates.
Brown PD, Loginov YY, Stobbs WM and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 72, (1) 39-57.*

Assessment of semiconductor epitaxial growth by transmission electron microscopy.
Brown PD and Humphreys CJ. *Materials Science and Technology (United Kingdom) vol. 11, (1) 54-65.*

Boride morphology in A (Fe, V, B) Ti-alloy containing B2-phase.
Inkson BJ, Boothroyd CB and Humphreys CJ. *Acta Metallurgica Et Materialia vol. 43, (4) 1429-1438.*

High-resolution electron microscopy observation of a1/2(112) superdislocation in Tial.
Inkson BJ and Humphreys CJ. *Philosophical Magazine Letters vol. 71, (6) 307-312.*

Measurement of low-order structure factors for silicon from zone-axis CBED patterns.
Saunders M, Bird DM, Zaluzec NJ, Burgess WG, Preston AR and Humphreys CJ. *Ultramicroscopy vol. 60, (2) 311-323.*

1994

Transmission electron microscopy investigations of II-VI/GaAs heterostructures.
Brown PD, Loginov YY, Mullins JT, Durose K, Brinkman AW and Humphreys CJ. *Journal of Crystal Growth vol. 138, (1-4) 538-544.*

Burgers vector determination of decorated dislocations in ?-TiAl by diffraction contrast and large-angle convergent-beam electron diffraction.
Wiezorek JMK, Preston AR, Court SA, Fraser HL and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 69, (2) 285-299.*

Famines and cataclysmic volcanism.
WHITE RS and HUMPHREYS CJ. *Geology Today vol. 10, (5) 181-185.*

Benefits of energy filtering for advanced convergent beam electron diffraction patterns.
Burgess WG, Preston AR, Botton GA, Zaluzec NJ and Humphreys CJ. *Ultramicroscopy vol. 55, (3) 276-283.*

1993

Novel fabrication method for nanometer-scale silicon dots and wires.
Chen GS, Boothroyd CB and Humphreys CJ. *Applied Physics Letters vol. 62, (16) 1949-1951.*

Microstructure of A ?-?2-? TiAl alloy containing iron and vanadium.
Inkson BJ, Boothroyd CB and Humphreys CJ. *Acta Metallurgica Et Materialia vol. 41, (10) 2867-2876.*

Evolution and religion [3].
White RS and Humphreys C. *Nature vol. 366, (6453).*

1992

ULTIMATE LIMITS OF LITHOGRAPHY.
MORGAN C, CHEN GS, BOOTHROYD C, BAILEY S and HUMPHREYS C. *Physics World vol. 5, (11) 28-32.*

1991

THE STAR OF BETHLEHEM - A COMET IN 5 BC - AND THE DATE OF THE BIRTH OF CHRIST.
HUMPHREYS CJ. *Quarterly Journal of The Royal Astronomical Society vol. 32, (4) 389-407.*

THE ORIGIN OF DISLOCATIONS IN MULTILAYERS.
HUMPHREYS CJ, MAHER DM, EAGLESHAM DJ, KVAM EP and SALISBURY IG. *Journal De Physique III vol. 1, (6) 1119-1130.*

State of British science [1].
Humphreys C. *Nature vol. 351, (6327).*

100 keV electron beam damage of metals and oxides.
Humphreys C. *Micron and Microscopica Acta vol. 22, (1-2) 147-148.*

1990

On the microstructural evolution of sintered Bi-Sr-Ca-Cu-O high-T c superconductors.
Zhang JG, McCartney DG and Humphreys CJ. *Superconductor Science and Technology vol. 3, (4) 185-190.*

Nanometre hole formation in Mgo using electron beams.
Turner PS, Bullough TJ, Devenish RW, Maherj DM and Humphreys CJ. *Philosophical Magazine Letters vol. 61, (4) 181-193.*

Crucifixion date [8].
Humphreys C and Waddington WG. *Nature vol. 348, (6303).*

Variation of dislocation morphology with strain in GexSi1-x epilayers on (100)Si.
Kvam EP, Maher DM and Humphreys CJ. *Journal of Materials Research vol. 5, (9) 1900-1907.*

1989

Tetragonal and monoclinic forms of GexSi1-x epitaxial layers.
Eaglesham DJ, Maher DM, Fraser HL, Humphreys CJ and Bean JC. *Applied Physics Letters vol. 54, (3) 222-224.*

Nanolithography using field emission and conventional thermionic electron sources.
Devenish RW, Eaglesham DJ, Maher DM and Humphreys CJ. *Ultramicroscopy vol. 28, (1-4) 324-329.*

Radiation effects.
Humphreys CJ. *Ultramicroscopy vol. 28, (1-4) 357-358.*

New Source of Dislocations in GexSi1-x/Si(100) Strained Epitaxial Layers.
Eaglesham DJ, Maher DM, Kvam EP, Bean JC and Humphreys CJ. *Physical Review Letters vol. 62, (2) 187-190.*

Controlling crystal growth.
Humphreys C. *Nature vol. 341, (6244).*

Dislocation nucleation near the critical thickness in GeSi/Si strained layers.
Eaglesham DJ, Kvam EP, Maher DM, Humphreys CJ, Eaglesham DJ, Maher DM and Bean JC. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 59, (5) 1059-1073.*

Materials science and engineering in Britain.
Humphreys C. *Advanced Materials vol. 1, (8-9) 249-250.*

Materials Science and Engineering in Britain.
Humphreys C. *Angewandte Chemie International Edition in English vol. 28, (8) 1077-1078.*

1988

X-ray topography of the coherency breakdown in GexSi 1-x/Si(100).
Eaglesham DJ, Kvam EP, Maher DM, Humphreys CJ, Green GS, Tanner BK and Bean JC. *Applied Physics Letters vol. 53, (21) 2083-2085.*

CBED and CBIM from semiconductors and superconductors.
Humphreys CJ, Eaglesham DJ, Maher DM and Fraser HL. *Ultramicroscopy vol. 26, (1-2) 13-23.*

High temperature superconducting ceramics.
Eaglesham DJ, Humphreys CJ, Alford NMN, Clegg WJ, Harmer MA and Birchall JD. *Materials Science and Engineering B vol. 1, (3-4) 229-235.*

Erratum: Limits on quantitative information from high-resolution electron microscopy of YBa2Cu3O7superconductors (Nature (1987) 329, (812-813)).
Huxford NP, Eaglesham DJ and Humphreys CJ. *Nature vol. 331, (6153).*

Convergent-beam imaging--a transmission electron microscopy technique for investigating small localized distortions in crystals.
Humphreys CJ, Maher DM, Fraser HL and Eaglesham DJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 58, (5) 787-798.*

Silica-Supported Fe?Pd Bimetallic Particles: Formation from Mixed-Metal Clusters and Catalytic Activity.
Braunstein P, Devenish R, Gallezot P, Heaton BT, Humphreys CJ, Kervennal J, Mulley S and Ries M. *Angewandte Chemie International Edition in English vol. 27, (7) 927-929.*

1987

Analytical electron microscopy of [Ni38Pt6(CO) 48H]5-.
Heaton BT, Ingallina P, Devenish R, Humphreys CJ, Ceriotti A, Longoni G and Marchionna M. *Journal of The Chemical Society, Chemical Communications (10) 765-766.*

New phases in the superconducting Y:Ba:Cu:O system.
Eaglesham DJ, Humphreys CJ, Alford NM, Clegg WJ, Harmer MA and Birchall JD. *Applied Physics Letters vol. 51, (6) 457-459.*

Detection and measurement of local distortions in a semiconductor layered structure by convergent-beam electron diffraction.
Maher DM, Fraser HL, Humphreys CJ, Knoell RV and Bean JC. *Applied Physics Letters vol. 50, (10) 574-576.*

Electron energy-loss spectroscopy studies of nanometre-scale structures in alumina produced by intense electron-beam irradiation.
Berger SD, Salisbury IG, Milne RH, Imeson D and Humphreys CJ. *Philosophical Magazine B: Physics of Condensed Matter; Statistical Mechanics, Electronic, Optical and Magnetic Properties vol. 55, (3) 341-358.*

Erratum: White lines in the L2,3 electron-energy-loss and x-ray absorption spectra of 3d transition metals (Physical Review B (1986) 34, (1467)).
Waddington WG, Rez P, Grant IP and Humphreys CJ. *Physical Review B vol. 35, (10).*

THE ORTHORHOMBIC AND TETRAGONAL PHASES OF Y1Ba2Cu3O9-y.
Eaglesham DJ, Humphreys CJ, Clegg WJ, Harmer MA, AIford NMN and Birchall JD. *Advanced Ceramic Materials vol. 2, (3 B) 662-667.*

Limits on quantitative information from high-resolution electron microscopy of YBa2Cu3O7 superconductors.
Huxford NP, Eaglesham DJ and Humphreys CJ. *Nature vol. 329, (6142) 812-813.*

1986

STEM/EDX MICOANALYSIS OF COMPOSITIONAL FLUCTUATIONS IN SEMICONDUCTOR MULTI-QUANTUM-WELL STRUCTURES.
Bullock JF, Titchmarsh JM and Humphreys CJ. *Semiconductor Science and Technology vol. 1, (6) 342-345.*

STEM/EDX microanalysis of compositional fluctuations in semiconductor multi-quantum-well structures.
Bullock JF, Titchmarsh JM and Humphreys CJ. *Semiconductor Science and Technology vol. 1, (6) 343-345.*

White lines in the L2,3 electron-energy-loss and x-ray absorption spectra of 3d transition metals.
Waddington WG, Rez P, Grant IP and Humphreys CJ. *Physical Review B vol. 34, (3) 1467-1473.*

1985

Geometric and electronic structure of a semiconductor superlattice.
Davies RA, Kelly MJ, Kerr TM, Hetherington CJD and Humphreys CJ. *Nature vol. 317, (6036) 418-419.*

Structure of the Al/Al2O3 interface.
Timsit RS, Waddington WG, Humphreys CJ and Hutchison JL. *Applied Physics Letters vol. 46, (9) 830-832.*

Surface physics: Hopping atoms in crystal growth.
Humphreys CJ. *Nature vol. 317, (6032).*

Examination of the Al/Al2O3 interface by high-resolution electron microscopy.
Timsit RS, Waddington WG, Humphreys CJ and Hutchison JL. *Ultramicroscopy vol. 18, (1-4) 387-394.*

1984

Crytallography: Defects in reduced oxides.
Humphreys CJ. *Nature vol. 309, (5966).*

MICRO-84: Electron microscopy 50 years on.
Humphreys CJ. *Nature vol. 311, (5981).*

Nanometer scale electron beam lithography in inorganic materials.
Salisbury IG, Timsit RS, Berger SD and Humphreys CJ. *Applied Physics Letters vol. 45, (12) 1289-1291.*

The atomic structure of the NiSi2-(001)Si interface.
Cherns D, Hetherington CJD and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 49, (1) 165-177.*

CHANNELLING RADIATION IN ELECTRON MICROSCOPY.
Spence JCH and Humphreys CJ. *Optik (Jena) vol. 66, (3) 225-242.*

1983

Dating the crucifixion.
Humphreys CJ and Waddington WG. *Nature vol. 306, (5945) 743-746.*

Electron beam writing on a 20-Å scale in metal ?-aluminas.
Mochel ME, Humphreys CJ, Eades JA, Mochel JM and Petford AM. *Applied Physics Letters vol. 42, (4) 392-394.*

A high-resolution electron microscopic study of defects in sodium ???-alumina.
Hull R, Smith DJ and Humphreys CJ. *Journal of Microscopy vol. 130, (2) 203-214.*

High resolution electron microscopy of silver ?- and ?? -aluminas.
Hull R, Petford A, Humphreys C and Smith D. *Solid State Ionics vol. 9-10, (PART 1) 181-186.*

1981

Fundamental concepts of stem imaging.
Humphreys CJ. *Ultramicroscopy vol. 7, (1) 7-12.*

RESOLUTION AND ILLUMINATION COHERENCE IN ELECTRON MICROSCOPY.
Humphreys CJ and Spence JCH. *Optik (Jena) vol. 58, (2) 125-142.*

1980

THE COMBINED CONVERGENT BEAM-CRITICAL VOLTAGE TECHNIQUE IN HIGH-VOLTAGE ELECTRON-MICROSCOPY.
SELLAR JR, IMESON D and HUMPHREYS CJ. *Micron vol. 11, (3-4) 241-242.*

A multiple scattering transport theory for electron.
Spencer JP and Humphreys CJ. *Philosophical Magazine a: Physics of Condensed Matter, Structure, Defects and Mechanical Properties vol. 42, (4) 433-451.*

1979

The scattering of fast electrons by crystals.
Humphreys CJ. *Reports On Progress in Physics vol. 42, (11) 1825-1887.*

1977

The distribution of intensity in electron diifraction patterns due to phonon scattering.
Rez P, Humphreys CJ and Whelan MJ. *Philosophical Magazine vol. 35, (1) 81-96.*

Additional image peaks in the high resolution imaging of dislocations.
Humphreys CJ, Drummond RA, Hart-Davis A and Butler EP. *Philosophical Magazine vol. 35, (6) 1543-1555.*

1974

A theoretical model for the energy dependence of electron channelling patterns in scanning electron microscopy.

Rolf Sandström , Spencer JF and Humphreys CJ. *Journal of Physics D: Applied Physics vol. 7, (7) 1030-1046.*

1973

SCANNING ELECTRON MICROSCOPY/1972. PROC I: 5TH ANNUAL SCANNING ELECTRON MICROSCOPE SYMPOSIUM, APR 1972; II: WORKSHOP ON BIOLOGICAL SPECIMEN PREPARATION FOR SCANNING ELECTRON MICROSCOPY, APR 1972.
Humphreys CJ, Spencer JP, Woolf RJ, Joy DC, Titchmarsh JM, Booker GR, Strojnik A, STickler R, Howell PGT, Boyde A, Brandis EK, Johari O and DeNee PB.

1972

The critical voltage effect in high voltage electron microscopy.
Lally JS, Humphreys CJ, Metherell AJF and Fisher RM. *Philosophical Magazine vol. 25, (2) 321-343.*

The optimum voltage in very high voltage electron microscopy.
Humphreys CJ. *Philosophical Magazine vol. 25, (6) 1459-1472.*

A dynamical theory for the contrast of perfect and imperfect crystals in the scanning electron microscope using backscattered electrons.
Spencer JP, Humphreys CJ and Hirsch PB. *Philosophical Magazine vol. 26, (1) 193-213.*

1971

Maximizing the penetration in high voltage electron microscopy.
Humphreys CJ, Thomas LE, Lally JS and Fisher RM. *Philosophical Magazine vol. 23, (181) 87-114.*

1970

Aspects of Bloch-wave channeling in high-voltage electron microscopy.
Humphreys CJ and Lally JS. *Journal of Applied Physics vol. 41, (1) 232-235.*

High resolution divergent-beam X-ray topography.
Tanner BK and Humphreys CJ. *Journal of Physics D: Applied Physics vol. 3, (7) 1144-1146.*

Kikuchi patterns in a high voltage electron microscope.
Thomas LE and Humphreys CJ. *Physica Status Solidi (a) vol. 3, (3) 599-615.*

1969

Inelastic scattering of fast electrons by crystals.
Humphreys CJ and Whelan MJ. *Philosophical Magazine vol. 20, (163) 165-172.*

1968

Absorption parameters in electron diffraction theory.
Humphreys CJ and Hirsch PB. *Philosophical Magazine vol. 18, (151) 115-122.*

1967

Some electron diffraction contrast effects at planar defects in crystals.
Humphreys CJ, Howie A and Booker GR. *Philosophical Magazine vol. 15, (135) 507-522.*