University of Birmingham

Professor Kyle Jiang BEng, MSC, PhD (King's College London)

Professor of Nanotechnology

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About

Kyle Jiang is Professor of Nanotechnology and **Director of Biomedical Engineering and Micro/Nanotechnology Research Centre (/research/activity/mechanical-engineering/bio-micro/index.aspx)** .

Kyle Jiang has authored about 200 publications in books, scientific journals and refereed international conferences. He is the inventor of five patents. His research in microengine has received wide public media reports. As the principal investigator, he has received major research grants from the following organizations:

- Microgas turbine engine, US company
- Prediction and management of fluid transport in PEM fuel cells, TSB
- Rapid SPR for parallel detection of pathogens in blood, European Union
- Fundamental research of nanomanufacturing, State Key Project, National Science Foundation of China
- Microceramic fabrication, Royal Society Incoming fellowship
- Feasibility Study of Micro Engine Fabrication, EPSRC

Kyle is regularly involved in organizing international conferences and gives keynote speeches. He reviews papers for a wide range of journals.

PhD study applications welcome. Scholarships can be provided to experienced researchers. Help can be provided to assist applicants to secure other funding.

Qualifications

- PhD in Mechatronics 1994, King's College London
- MSc in Computational Mechanics, 1986, Xidian University
- BEng in Mechanical Engineering, 1982

Biography

Kyle Jiang received his PhD in mechatronics at King's College London in 1994. He has been with the University of Birmingham as a member of academics since 1999.

Prior to his current appointment, he was a research assistant at King's College London. In 1998, he joined the University of Liverpool as a lecturer.

His current research interest is in nanotechnology for energy and bio-medical applications.

Teaching

Teaching Programmes

- Mechatronics
- Control Engineering
- Engineering design projects, in both groups and individuals

Postgraduate supervision

PhD study applications welcome. Scholarships can be provided to experienced researchers. Help can be provided to assist applicants to secure other funding.

- Students with excellent potential and research experience are welcome to join Prof Jiang for PhD study to tackle new scientific and engineering challenges in the interested areas.
- Those with government scholarships are particularly encouraged to apply;
- Visiting scholars with relevant background are welcome

PhD opportunities

Research

Research Themes and Activities

Nanotechnology for energy applications

- **Micro reciprocating engines and Micro Wankel engine (/research/activity/mechanical-engineering/bio-micro/micro-nano/micro-reciprocating-engine-wankel-engine.aspx)**
- **Microgas turbine engine (/research/activity/mechanical-engineering/bio-micro/micro-nano/microgas-turbine-engines.aspx)**
- **High Performance turbochargers (/research/activity/mechanical-engineering/bio-micro/micro-nano/high-performance-turbochargers.aspx)**
- **Characterization of porous PEM fuel cell layers in micro and nano scales (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-fuelcell.pdf)**
- Energy scavenging for tyre condition monitoring systems
- Nanotechnology for advanced batteries

Nanotechnology for biomedical applications

- **Bi-metallic nanosensor chips for surface plasmon resonance systems (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-bi-metallic.pdf)**
- **Large area nanopatterns for localized surface plasmon resonance (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-large-nanopatterns.pdf)**
- **Nanotechnology improved whole cell patch clamp (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-patch.pdf)**

Innovative micro/nano fabrication techniques

The group has extensive experience in focused ion beam milling and deposition in nano scales, Si deep reactive ion etching (DRIE), and UV photolithography. In addition, it has developed the following micro/nano fabrication techniques:

- **Nanopattern generation using modified nanosphere lithography (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-nanopatterns.pdf)**
- **High aspect ratio SU-8 microstructures (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-microstructures.pdf)**
- **Electroforming of metalic and nano composite micro structures (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-electroforming.pdf)**
- **Soft lithography for forming ceramic and nanocomposite microcomponents (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-lithography.pdf)**
- Soft lithography for forming stainless steel and composite microcomponents
- **Micro and nano tomography (PDF) (/Documents/college-eps/mechanical/staff/jiang/jiang-tomography.pdf)**

Other activities

- Fellow of Institution of Engineering and Technology (former IEE);
- Fellow of Higher Education Academy;
- Member of the editorial board of International Journal of Nanoparticles;
- General chair of international conferences in nanotechnology;
- Member of committees of international conferences

Publications

Selected publications

Referred journal publications:

2013: (by 31 March)

- A Mohammadkhani, X Chen, S Zhang and K Jiang, “Uniform Binary Arrays of Nano-apertures Derived from Bilayer Colloidal Lithography”, submitted to Nano Letters.
- J Liu, H Yan, K Jiang, “Alumina composites reinforced with graphene platelets and silicon carbide nanoparticles”, submitted to Journal of American ceramic society
- H. Hassanin, and K. Jiang “Net shape manufacturing of ceramic micro parts with tailored graded layers for functional micro devices “Acta Materila.
- H. Hassanin, and K. Jiang “Fabrication and characterization of YSZ micro parts via slip casting and soft moulding”, Acta Materila.
- J Liu, H Yan, M J Reece, K Jiang, “Mechanical properties of graphene platelet-reinforced alumina ceramic composites”, Ceramics International, online 21 January 2013
- M Malboubi, M Behroozi, J Bowen, M Chizari, G Charras, K Jiang, “The effect of aperture size on gigaseal formation”, Biophysical Journal, 104(2), 29 January 2013
- S Ghosh, J Bowen, K Jiang, D M Espino, D E T Shepherd, “Investigation of techniques for the measurement of articular cartilage surface roughness”, Micron, 44:179-84, January 2013.

2012:

- Y Gao, X Zhang, P Rama, R Chen, H Ostadi, K Jiang, “An Improved MRT Lattice Boltzmann Model for Calculating Anisotropic Permeability of Compressed and Uncompressed Carbon Cloth Gas Diffusion Layers Based on X-Ray Computed Micro-Tomography”, Journal of Fuel Cell Science and Technology, 9, 041010, 2012.
- H. Hassanin, H. Ostadi, K. Jiang, “Surface roughness and geometrical characterization of ultra-thick micro moulds for ceramic micro fabrication using soft lithography”, International Journal of Advanced Manufacturing Technology, DOI 10.1007/s00170-012-4650-x.
- J Liu, H Yan, M J Reece, K Jiang, “Toughening of Zirconia/Alumina Composites by the Addition of Graphene”, Journal of the European Ceramic Society, Vol 32, 16, Pages 4185–4193, December 2012.
- A. Mohammadkhani, H. Hassanin, C. Anthony, K. Jiang, “Nanopatterning of metallic features over uniformed arrays of microbowl structures”, Microelectronic Engineering, Vol 98, Pages 266–269, October 2012.
- H. Hassanin, A. Mohammadkhani and K. Jiang, “Fabrication of ordered PDMS nanostructured arrays using a PDMS/PDMS replication process”, Lab on a Chip, 12, 4160-4167, 2012, ISSN : 1473-0197(printed), 1473-0189 (online).
- Y Gao, X Zhang, P Rama, R Chen, H Ostadi, K Jiang, “Lattice Boltzmann simulation of water and gas flow in porous gas diffusion layers in fuel cells reconstructed from micro-tomography” , Computers and Mathematics with Applications, Volume 65, Issue 6, Pages 891–900, March 2013, ISSN: 0898-1221
- Y Gao, X Zhang, P Rama, Y Liu, R Chen, H Ostadi, K Jiang, “Modeling Fluid Flow in the Gas Diffusion Layers in PEMFC Using the Multiple Relaxation-time Lattice Boltzmann Method”, Fuel Cells, Volume 12, Issue 3, pages 365–381, June, 2012, ISSN: 1615-6854 (online)
- Y Gao, X Zhang, P Rama, Y Liu, R Chen, H Ostadi, K Jiang, “Calculating the Anisotropic Permeability of Porous Media Using the Lattice Boltzmann Method and X-ray Computed Tomography”, Transport in Porous Media, Vol 92, 2, 457-472, 2012, DOI: 10.1007/s11242-011-9914-7, ISSN: 0169-3913 (print), ISSN: 1573-1634 (online)

2011:

- Xianzhong Chen, Yu Luo, Jingjing Zhang, Kyle Jiang, John B. Pendry and Shuang Zhang, “Macroscopic Three-dimensional Invisibility Cloaking of Visible Light”, Nature Communications, vol 2, 176, 2011, ISSN: 2041-1723 (online).
- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, Y. Gao, X. X. Zhang, R. Fisher, M. Jeschke, “Simulation of liquid water breakthrough in a nanotomography reconstruction of a carbon paper gas-diffusion layer”, AIChE Jounal, DOI: 10.1002/aic.12581, 2011.

2010:

- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, X. X. Zhang, Determination of the anisotropic permeability of a carbon cloth gas diffusion layer through X-ray computer micro-tomography and single-phase lattice Boltzmann simulation, International journal for numerical methods in fluids, published online: 5 JUL 2010, DOI: 10.1002/fld.2378, ISSN (print): 0271-2091, ISSN (online): 1097-0207.
- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, X. X. Zhang, “Multiscale Simulation of Single-Phase Multicomponent Transport in the Cathode Gas Diffusion Layer of a Polymer Electrolyte Fuel Cell”, ECS Transactions, vol 28, 27, pp 103-111, 2010, ECS Transactions, ISSN (online): 1938-6737. ISSN (print): 1938-5862.
- H. Ostadi, P. Rama, Y. Liu, R. Chen, X. X. Zhang, K. Jiang, 3D reconstruction of a gas diffusion layer and a microporous layer, Journal of Membrane Science, 351(1), 69-74, 2010.
- X. Chen, H. Ostadi, K. Jiang, 3D surface reconstruction of diatomaceous frustules, Analytical biochemistry, 403(1-2), 63-66, 2010.
- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, X. X. Zhang, “Multiscale Simulation of Single-Phase Multicomponent Transport in the Cathode Gas Diffusion Layer of a Polymer Electrolyte Fuel Cell”, in press, ECS Transactions - Vancouver, Canada" Volume 28, 2010
- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, X. Zhang, Y. Gao, P. Grassini, D. Brivio, “Determination of the anisotropic permeability of a carbon cloth gas diffusion layer through X-ray computer micro-tomography and single-phase lattice Boltzmann simulation”, International Journal for Numerical Methods in Fluids, 5 JUL 2010, DOI: 10.1002/fld.2378, ISSN (print): 0271-2091. ISSN (online): 1097-0363
- Xueyong Wei, Xianzhong Chen, Kyle Jiang, “Fabrication of Nickel Nanostructure Arrays Via a Modified Nanosphere Lithography”, Nanoscale Research Letters, DOI 10.1007/s11671-010-9770-3, 2010, ISSN: 1556-276X (print)
- Guoqiang Han, Zhuangde Jiang, Weixuan. Jing. Jianzhong Gao, Philip D. Prewett and Kyle Jiang, “Characterization of sidewall roughness for silicon microstructures in micro actuator”, 33. 3-4. 985-990, International Journal of Applied Electromagnetics and Mechanics, ISSN: 1383-5416.
- Pratap Rama, Yu Liu, Rui Chen, Hossein Ostadi, Kyle Jiang, Yuan Gao, Xiaoxian Zhang, Rosemary Fisher, Michael Jeschke, "Multi-Scale Modelling of Single-Phase Multi-Component Transport in the Cathode Gas Diffusion Layer of a Polymer Electrolyte Fuel Cell", Energy & Fuels, 24 (5), pp 3130–3143, ISSN: 0887-0624 begin_of_the_skype_highlighting (print) end_of_the_skype_highlighting, ISSN: 1520-5029 (online).
- Zhigang Zhu, Hany Hassanin and Kyle Jiang, “A Soft Moulding Process for Manufacture of Net-shape Ceramic Microcomponents”, International Journal for Advanced Manufacturing Technology, Vol.47, pages 147-152, 2010,ISSN: 0268-3768 (Print) 1433-3015 (Online).
- H. Ostadi, K. Jiang, D W L Hukins, “A comparison of surface roughness analysis methods applied to urinary catheters”, Precision Engineering, Vol 34, Iss 4, 2010, Pages 798-801, ISSN: 0141-6359.
- Pratap Rama, Yu Liu, Rui Chen, Hossein Ostadi, Kyle Jiang, Xiaoxian Zhang, Rosemary Fisher and Michael Jeschke, “An X-Ray Tomography Based Lattice-Boltzmann Simulation Study on Gas Diffusion Layers of Polymer Electrolyte Fuel Cells”, ASME Journal of Fuel Cell Science and Technology, vol. 7 /3, 031015, page 1-12, June 2010, ISSN: 1550-624X.
- X. Chen and K. Jiang, “Effect of aging on optical properties of bimetallic sensor chips”, vol. 18, 2, pages 1105-1112, Optics Express, 2010, ISSN: 1094-4087.
- M Imbaby and K Jiang, “Fabrication of 316-L stainless steel micro components using encapsulating soft mould and isopressing technique”, Microelectronic Engineering, vol. 87, 5-8, pages 1623-1628, 2010, ISSN 0167-9317.
- M Malboubi, Y Gu, K Jiang, “Experimental and simulation study of the effect of pipette roughness on giga-seal formation in patch clamping”, Microelectronic Engineering, vol. 87, 5-8, pages 778-781, 2010, ISSN 0167-9317.
- H Ostadi, P Rama, Y Liu, R Chen, X Zhang and K Jiang, “Influence of threshold variation on determining the properties of a polymer electrolyte fuel cell gas diffusion layer in X-ray nano-tomography”, Chemical Engineering Science, 65(6), pages 2213-2217, 2010, ISSN: 0009-2509.
- M F Imbaby and K Jiang, “Fabrication of 316-L stainless steel micro components using encapsulating soft mould and isopressing technique”, Microelectronic Engineering, 87(5-8), pages 1650-1654, 2010, ISSN 0167-9317.
- H. Hassanin and K. Jiang, “Functionally graded microceramic components”, Microelectronic Engineering, 87(5-8), Pages: 1610-1613, 2010, ISSN 0167-9317.
- Mohamed Imbaby and Kyle Jiang, “Micro fabrication of stainless steel micro components using soft moulding and aqueous slurry”, Microelectronic Engineering, Volume 87, Issue 1, Pages 72-78, January 2010, ISSN 0167-9317.
- H. Hassanin and K. Jiang, “An optimized process for the fabrication of zirconia micro parts”, Microelectronic Engineering, 87(5-8), Pages: 1617-1619, 2010, ISSN 0167-9317.
- H Ostadi, P Rama, Y Liu, R Chen, X Zhang and K Jiang, “Threshold Fine-Tuning and 3D Characterisation of Porous Media Using X-ray Nanotomography”, Current Nanoscience, 6(2), 226-231, 2010, ISSN: 1573-4137.
- X. Chen, M. Pan, K. Jiang , “Sensitivity enhancement of SPR biosensor by improving surface quality of glass slides”, Microelectronic Engineering, 87(5-8), Pages: 790-792, 2010, ISSN 0167-9317.

2009:

- X. Chen, X. Wei and K. Jiang, “The fabrication of high-aspect-ratio, size-tunable nanopore arrays by modified nanosphere lithography”, Nanotechnology, 20, 42, 425605, 2009, ISSN 0957-4484 (print), ISSN 1361-6528 (online).
- M. Imbaby and K. Jiang, “Cold-isopress-based process for fabrication of stainless steel micromachine components”, Micro & Nano Letters, 4, 3, 160-165, 2009, ISSN: 1750-0443.
- X. Chen, X. Wei, K. Jiang, “Large-scale fabrication of ordered metallic hybrid nanostructures”, Optics Express, 16(16), pp 11888-11893, 2009, ISSN: 1094-4087.
- M. Imbaby and K. Jiang, “Net shape fabrication of stainless steel–alumina composite micro parts”, Journal of Micromechanics and Microengineering, 045018 (7pp) 19, 2009, ISSN: 0960-1317 (Print); 1361-6439 (online).
- Jiang Zhuangde, Zhu Qiang, Zhao Zexiang, Wang Hairong, Zhou Xiangyang, Philip D.Prewett and Kyle Jiang, “Study on the related problems in evaluation of mechanical properties for MEMS materials”, International Journal of Applied Mechanics, vol.1, no.4, 2009, ISSN: 1758-8251 (print), 1758-826X (online).
- M. Imbaby and K. Jiang, “Cold-isopress based process for fabrication of stainless steel micro machine components”, Micro & Nano Letters, 4(3), pages 160-165, 2009, ISSN: 1750-0443.
- M. Malboubi, H. Ostadi, S. Wang, Y. Gu and K. Jiang , “Effects of the Surface Morphology of Pipette Tip on Giga-seal Formation”, Engineering Letters, 17:4, EL_17_4_10, ISSN: 1816-093X (print);1816-0948 (online).
- H. Ostadi, P. Rama, Y. Liu, R. Chen, X. Zhang and K. Jiang, “Nanotomography based study of gas diffusion layers”, Microelectronic Engineering, 10.1016/j.mee. 2009.10.027, 2009, ISSN 0167-9317.
- M. Imbaby H. Ostadi K. Jiang, “Characterisation of stainless steel microparts fabricated by soft moulding technique”, Micro & Nano Letters, Vol. 4, 2, pp. 99–105, 2009, ISSN: 1750-0443.
- X. Chen, X. Wei, and K Jiang, "Fabrication of large-area PDMS nanobowl structures”, Microelectronic Engineering, 86, pp. 871-823, 2009, ISSN 0167-9317.

- H. Ostadi, K. Jiang and P.D. Prewett, “Characterisation of FIB Milling Yield of Metals by SEM Stereo Imaging Technique”, Microelectronic Engineering, 86, pp. 1021-1024, 2009, ISSN 0167-9317.
- Xueyong Wei and Kyle Jiang, “Synthesis and characterization of nanoparticulate strengthened nickel composite components”, Smart Materials & Micro/Nanosystems, vol 54, pp 299-304, 2009, ISSN: 1662-0356.
- H Ostadi, M Malboubi, P D Prewett, and K Jiang, , “3D reconstruction of a micro pipette tip”, Microelectronic Engineering, 86, pp. 868-870, 2009, ISSN 0167-9317.
- Mohamed Imbaby and Kyle Jiang, “Fabrication of free standing 316-L stainless steel-AL2O3 composite micro machine parts by soft moulding”, Acta Materialia, 57, pp. 4751-4757, 2009, ISSN: 1359-6454.
- H Hassanin, K Jiang, “Alumina-SiC composites suspension preparation for softlithography microfabrication”, Microelectronic Engineering, 86, pp. 929-932, 2009, ISSN 0167-9317.
- Hany Hassanin and Kyle Jiang, “Fabrication of Al2O3/SiC Composite Microcomponents using Non-aqueous Suspension”, Advanced Engineering Materials, 11, No. 1-2, pp101-105, 2009, ISSN: 1438-1656 (print), 1527-2648 (online).

2008:

- Hossein Ostadi, Kyle Jiang, P. D. Prewett, “Micro/Nano X-Ray Tomography Reconstruction Fine-Tuning Using SEM Images”, Micro & Nano Letters, v 3, 4, p. 106-109, December 2008, ISSN: 1750-0443.
- M. Imbaby, K. Jiang, and I. Chang, “A soft moulding process for fabrication of micro machine parts from stainless steel powder”, Advanced Engineering Materials, 11, No. 3, pp202-205, 2008, ISSN: 1438-1656 (print), 1527-2648 (online).
- M. Imbaby, K. Jiang and I. Chang, “Net shape fabrication of stainless-steel micro machine components from metallic powder”, Vol. 18, 11, Journal of Micromechanics and Microengineering, vol 19, iss 4, Article Number: 045018, 2009, ISSN: 0960-1317 (Print); 1361-6439 (online).
- Xueyong Wei1 and Kyle Jiang, “Synthesis and characterization of nanoparticulate strengthened nickel microcomponents”, Advances in Science and Technology, Vol. 54, pp 299-304, 2008, ISSN: 1662-8969.
- J.-S. Kim, I. T. Chang and K. Jiang, “A Net-Shaping Process to Turn Al Powder into Alumina Ceramic Microcomponents”, Advanced Engineering Materials, Vol. 11, Issue 1-2, pp 106-110, 2009, ISSN: 1438-1656 (print), 1527-2648 (online).
- X Chen and K Jiang, “A large-area hybrid metallic nanostructure array and its optical properties”, Nanotechnology, 19 215305 (4pp), 2008, ISSN: 1438-1656 (print), 1527-2648 (online).
- Mohamed Imbaby, Kyle Jiang, Isaac Chang, “Soft lithography and powder metallurgy for fabrication of micro stainless steel machine parts”, Materials Letters, vol 62, 26, pp 4213-4216, 2008, ISSN: 0167-577X.
- C H Lee and K Jiang, “Fabrication of thick electroforming micro mould using KMPR negative tone photoresist”, Journal of Micromechanics and Microengineering, 18 055032 (7pp), 2008, ISSN: 0960-1317 (Print); 1361-6439 (online).
- Lihong Cheng, Liaoying Zheng, Guorong Li, Qingrui Yin and Kyle Jiang, “Synthesis of sealed sponge ZnO nanospheres through a novel NH3-evaporation method”, Nanotechnology, 19, 075605 (6pp) 2008, ISSN 0957-4484 (print), ISSN 1361-6528 (online).
- L Cheng, L Zheng, Z Yao, G Li, Q Yin, K Jiang, “Manufacture of Epoxy-Silica Nanoparticle Composites and Characterization of their Dielectric Behaviour”, International Journal of Nanoparticles, vol 1, 1, 1-13, 2008, ISSN: 1753-2507 (print); 1753-2515(online).
- H.Ostadi, M.Arroyo P.D. Prewett, K.Jiang, S. E. Huq, “Optimization of a Novel Micro-Opto-Xray Imaging Lens”, Microelectronic Engineering, v 85, 5-6, 2008, ISSN 0167-9317.
- X Wei, H Dong, CH Lee and K Jiang, “Determination of Young’s Modulus of Electrochemical Co-deposited Ni-Al2O3 Nanocomposite”, Materials Letters, 62, 1916–1918, 2008, ISSN 0167-577X.
- X Wei, CH Lee and K Jiang, “Thick Photoresists for Electroforming Metallic Micro Components”, Proceedings of the Institution of Mechanical Engineers, Part C, Journal of Mechanical Engineering Science, vol 222, 37-42, 2008, ISSN: 0022-2542.
- Z Zhu, G Li, B Li, Q Yin, Kyle Jiang, “The influence of Yb and Nd substituents on high-power piezoelectric properties of PMS-PZT ceramics”, Ceramics International, vol 34, issue 8, pp 2067-2072, 2008, ISSN 0272-8842.

Referred conference publications:

2013:

- M Malboubi, M Behroozi, J Bowen, M Chizari, G Charras, K Jiang, “The effect of aperture size on gigaseal formation”, Biophysical Society 57th Annual Meeting, Philadelphia, 2-6 February 2013

2012:

- H. Hassanin, A. Mohammadkhani, and K. Jiang, “Electrophoretic Deposition of Nickel into Porous Alumina Matrix”, Proceedings of IEEE International Conference on Nanotechnology, Birmingham, UK, 20-23 August 2012.
- A. Mohammadkhani, H. Ostadi, and K. Jiang, “Morphological Charactrarization of Sub-Micron PDMS Bowl Structures”, Proceedings of IEEE International Conference on Nanotechnology, Birmingham, UK, 20-23 August 2012.

2010:

- Hassanin H., Ostadi H., Jiang K., Surface and geometry characterisation of soft lithography thick moulds for net shape ceramic manufacturing, Micro Nano Engineering Conference MNE10, Genova, Italy, 2010
- Mohammadkhani A , Malboubi M , Anthony C , and Jiang K, "Surface Property Characterization of Ordered Nanostructure Using SEM Stereoscopic Technique", 36th International Conference on Micro & Nano Engineering, Genoa, Italy, 19-22 September 2010.
- M Malboubi, Y Gu, K Jiang, “Characterization of surface properties of glass μ-pipettes using SEM stereoscopic technique”, 36th International Conference on Micro & Nano Engineering, Genoa, Italy, 19-22 September 2010.
- Hany Hassanin and Kyle Jiang, “Replication of thick PDMS micro patterns using surfactants as release agents”, 36th International Conference on Micro & Nano Engineering, Genoa, Italy, 19-22 September 2010.
- Xianzhong Chen and Kyle Jiang, “Fabrication of large-area PDMS triangle nanopillar arrays”, 2010 IEEE Nanotechnology Materials and Devices Conference, Montery, California, USA, 12-15 October 2010.
- H. Hassanin and K. Jiang, “Infiltration-processed functionally graded materials microceramic components”, Proceedings of the 23rd IEEE International Conference on Micro Electro Mechanical Systems, Hong Kong, January 24 - 28, 2010
- P. Rama, Y. Liu, R. Chen, H. Ostadi, K. Jiang, X. X. Zhang, “Multiscale simulation of transport in the polymer electrolyte fuel cell”, ECS 217th Meeting, 2010.
- Zhuangde Jiang, Fengxia Zhao, Weixuan Jing, Chenying Wang, Philip D. Prewett, and Kyle Jiang, “Estimation of measurement uncertainty of LER/LWR based on the next generation GPS”, Proceedings of the 10th International Symposium on Measurement and Quality Control. September 5-9, 2010, Osaka, Japan
- P. Rama, Y. Li, R. Chen, H. Ostadi, K. Jiang and X. Zhang, “Multiscale Simulation of Single-Phase Multicomponent Transport in the Cathode Gas Diffusion Layer of a Polymer Electrolyte Fuel Cell”, 217th Electrochemical Society Meeting, Vancouver, 25-30 April 2010.

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- M Imbaby and K Jiang, “Cold iso-pressing technique for production of stainless steel micro machine components”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- M F Imbaby and K Jiang, “Stainless steel-titania composite micro gear fabricated by soft moulding and dispersing technique”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- H. Ostadi, K. Jiang, D W L Hukins, “3D surface reconstruction and characterisation of urinary catheters”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- H. Ostadi, P. Rama, Y. Liu, R. Chen, X. Zhang and K. Jiang, “Nanoscale porosity characterization using X-ray nanotomography”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- H. Hassanin and K. Jiang, “Functionally graded microceramic components”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- H. Hassanin and K. Jiang, “An optimized process for the fabrication of zirconia micro parts”, the 35th International Conference on Micro and Nano Engineering, Ghent, Belgium, September 28 – October 1, 2009
- Zhuangde Jiang, Fengxia Zhao, Weixuan Jing, Philip D. Prewett and Kyle Jiang, Motif parameters based characterization of line edge roughness(LER) of a nanoscale grating structure. Proceedings of the 9th International Symposium on Measurement Technology and Intelligent Instruments(ISMTII), St.Petersburg, Russia. Vol. 1, pp. 128-130, June 29th–July 2nd, 2009
- Zhuangde Jiang, Libo Zhao, Yulong Zhao, Yuanhao Liu, Philip D. Prewett, and Kyle Jiang. Oil-field isolated high pressure sensor for high temperature application. Proceedings of the 9th international symposium on measurement technology and intelligent instruments(ISMTII), St. Petersburg, Russia. Vol 3, pp. 214-218, June 29th–July 2nd, 2009
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- M. Malboubi, H. Ostadi, S. Wang, Y Gu and K. Jiang, “The effect of pipette tip roughness on giga-seal formation”, World Congress on Engineering 2009, vol 1-2, pages 1849-1852, 2009, ISBN: 978-988-17012-5-1.
- M. L. Ke, Y. Wang, S. Wei, K. Jiang, M. J. Lancaster, “Precision microfabrication of millimetre wave components”, Laser Metrology and machine Performance IX, 2009 LAMDAMAP Conference, Brunel, June 2009
- Mohamed Imbaby and Kyle Jiang, “Fabrication process of 3D micro components from stainless steel aqueous slurry”, Proceedings of the World Congress on Engineering, Vol I, pp. 536-540, July 1 - 3, 2009, London, U.K. ISBN: 978-988-17012-5-1.
- Zhuangde Jiang, Fengxia Zhao, Weixuan Jing, Philip D. Prewett, Kyle Jiang, “Characterization of line edge roughness and line width roughness of nano-scale typical structures,” NEMS, pp.299-303, 2009 4th IEEE International Conference on Nano/Micro Engineered and Molecular Systems, 2009
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- Z Jiang, F Zhao, W Jing, P D Prewett and K Jiang, “Characterization of Line Edge Roughness and Line Width Roughness of Nano-scale Typical Structures”, Proceeding of IEEE NEMS 09 Conference, Shenzhen, China, 5-8
- Z Jiang, L Zhao, Y Zhao, P D. Prewett , and K Jiang, “Research and Evaluation of a High Temperature Pressure Sensor Chip”, Proceeding of IEEE NEMS 09 Conference, Shenzhen, China, 5-8 January 2009.

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