

## Mohan Edirisinghe: List of Journal Publications: As at March 2022

This list is updated Annually

### **2022**

Facile One-Pot Method for All Aqueous Green Formation of Biocompatible Silk Fibroin-Poly (Ethylene Oxide) Fibers for Use in Tissue Engineering

P.L.Heseltine, C.Bayram, M.Gultekinoglu, S.Homer-Vanniasinkam, K.Ulubayram and M.Edirisinghe, *ACS Biomaterials Science & Engineering*.

<https://doi.org/10.1021/acsbiomaterials.1c01555>

Severe Acute Respiratory Syndrome Type 2-Causing Coronavirus: Variants and Preventive Strategies

M.O.Aydogdu, J.L.Rohn, N.V.Jafari, F.Brako, S.Homer-Vanniasinkam and M.Edirisinghe, *Advanced Science*. <https://doi.org/10.1002/advs.202104495>

Exploiting the Antiviral Potential of Intermetallic Nanoparticles

R.K.Matharu, Y-K.Cheong, G.Ren, M.Edirisinghe and L.Ciric, *Emergent Materials*.

<https://doi.org/10.1007/s42247-021-00306-2>

Enhancing In Vitro Stability of Albumin Microbubbles Produced Using Microfluidic T-Junction Device

A.H.Khan, S.Surwase, X.Jiang, M.Edirisinghe and S.V.Dalvi, *Langmuir*.

<https://doi.org/10.1021/acs.langmuir.1c01516>

Metformin-Loaded Polymer-Based Microbubbles/Nanoparticles Generated for the Treatment of Type 2 Diabetes Mellitus

S.Cesur, M.E.Cam, F.S.Sayin, S.Su, A.Harker, M.Edirisinghe and O.Gunduz, *Langmuir*.

<https://doi.org/10.1021/acs.langmuir.1c00587>

Theme Issue on Coronavirus and Surfaces

M.Edirisinghe

*Interface Focus*, 12(2022)6th February.

**[ISSUE EDITORIAL & FRONT COVER]**

### **2021**

Metal-based Nanoparticles for Combating Antibiotic Resistance

E.Altun, M.O.Aydogdu, E.Chung, G.Ren, S.Homer-Vanniasinkam and M.Edirisinghe, *Applied Physics Reviews*, 8(2021)041303.

**[Featured/Editor's picks]**

Core–sheath Polymer Nanofiber Formation by the Simultaneous Application of Rotation and Pressure in a Novel Purpose-designed Vessel

H.Alenezi, M.E.Cam and M.Edirisinghe, *Applied Physics Reviews*, 8(2021)041412.

**[Work featured on the cover of the journal and also Scilight]**

Optimization of Process-Control Parameters for the Diameter of Electrospun Hydrophilic Polymeric Composite Nanofibers

F.S.Alfares, E.Guler, H.Alenezi, M.E.Cam and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 306(2021)2100471.

**[Work featured as a Frontispiece]**

Vitamin D3/vitamin K2/magnesium-loaded Polylactic acid/tricalcium phosphate/polycaprolactone Composite Nanofibers Demonstrated Osteoinductive Effect by Increasing Runx2 via Wnt via Wnt/ $\beta$ -catenin Pathway  
E.Guler, Y.E.Baripoglu, H.Alenezi, A.Arikan, R.Babazade, S.Unal, G.Duruksu, F.S.Alfares, Y.Yazir, F.N.Oktar, O.Gunduz, M.Edirisinghe and M.E.Cam, *International Journal of Biological Macromolecules*, 190(2021)244-258.

Utilising Co-Axial Electrospinning as a Taste-Masking Technology for Paediatric Drug Delivery  
H.E.Abdelhakim, A.Coupe, C.Tuleu, M.Edirisinghe and D.Q.M.Craig, *Pharmaceutics* 13(2021)1665.

Co-Axial Gyro-Spinning of PCL/PVA/HA Core-Sheath Fibrous Scaffolds for Bone Tissue Engineering  
S.Mahalingam, C.Bayram, M.Gultekinoglu, K.Ulubayram, S.Homer-Vanniasinkam and M.Edirisinghe, *Macromol. Biosci.*, 21(2021)2100177.  
**[Work featured as a Frontispiece]**

Harnessing Polyhydroxyalkanoates and Pressurized Gyration for Hard and Soft Tissue Engineering  
P.Basnett, R.K.Matharu, C.S.Taylor, U.Illangakoon, J.I.Dawson, J.M.Kanczler, M.Behbehani, E.Humphrey, Q.Majid, B.Lukasiewicz, R.Nigmatullin, P.Heseltine, R.O.C.Oreffo, J.W.Haycock, C.Terracciano, S.E.Harding, M.Edirisinghe and I.Roy, *ACS Appl. Mater. & Interfaces*, 13(2021)32624-32639.

Alleviating the Toxicity Concerns of Antibacterial Cinnamon-polycaprolactone Biomaterials for Healthcare-related Biomedical Applications  
J.Ahmed, M.Gultekinoglu, C.Bayram, D.Kart, K.Ulubayram and M.Edirisinghe *MedComm*, 2(2021)236-246.

Perspective: Covid-19; Emerging Strategies and Material Technologies  
J.Ahmed, H.Alenezi, U.Edirisinghe and M.Edirisinghe *Emergent Materials*, 4(2021)3-8.  
**[INVITED for Special Issue: Intelligent emergent materials to combat COVID-19 pandemic]**

A Novel Reusable Anti-COVID-19 Transparent Face Respirator with Optimized Airflow  
H.Alenezi, M.E.Cam and M.Edirisinghe, *Bio-design and Manufacturing*,4(2021)1-9.

Next-generation Antimicrobial Peptides (AMPs) Incorporated Nanofibre Wound Dressings  
A.Afshar, E.Yuca, C.Wisdom, H.Alenezi, J.Ahmed, C.Tamerler and M.Edirisinghe, *Medical Devices & Sensors*, 4(2021)e10144.

Accelerated Diabetic Wound Healing by Topical Application of Combination Oral Antidiabetic Agents-loaded Nanofibrous Scaffolds: An In Vitro and In Vivo Evaluation Study  
M.E.Cam, B.Ertas, H.Alenezi, A.N.Hazar-Yavuz, S.Cesur, G.S.Ozcan, C.Ekentok, E.Guler, C.Katsakouli, Z.Demirbas, D.Akakin, M.S.Eroglu, L.Kabasakal, O.Gunduz and M.Edirisinghe, *Mater. Sci. Eng. C*, 119(2021)111586.

Surface Interactions and Viability of Coronaviruses

M.O.Aydogdu, E.Altun, E.Chung, G.Ren, S.Homer-Vanniasinkam, B.Chen and M.Edirisinghe, *J.Roy. Soc. Interface*,18(2021)20200798.

**[HEADLINE REVIEW]**

Wholly Biobased, Highly Stretchable, Hydrophobic, and Self-healing Thermoplastic Elastomer

Y.Nurhamiyah, A.Amir, M.Finnegan, E.Themistou, M.Edirisinghe and B.Chen *ACS Appl. Mater. & Interfaces*,13(2021)6720-6730.

Porous Graphene Composite Polymer Fibres

J.Ahmed, T.A.Tabish, S.Zhang and M.Edirisinghe, *Polymers*,13(2021)76.

Composite Nanoclay-hydroxyapatite-polymer Fiber Scaffolds for Bone Tissue Engineering Manufactured using Pressurized Gyration

K.Kundu, A.Afshar, D.R.Katti, M.Edirisinghe and K.S.Katti, *Composites Science and Technology*, 202(2021)108598.

## 2020

Current Methodologies and Approaches for the Formation of Core–sheath Polymer Fibers for Biomedical Applications

S.Mahalingam, R.Matharu, S.Homer-Vanniasinkam and M. Edirisinghe, *Appl. Phys. Rev.*, 7(2020)041302.

**[INVITED FEATURED ARTICLE: Work news-reported in UPI on 14th October 2020 and many other news agencies]**

Novel Antibiotic-loaded Particles Conferring Eradication of Deep Tissue Bacterial Reservoirs for the Treatment of Chronic Urinary Tract Infection

W.K.Lau, D.Dharmasena, H.Horsley, N.V.Jafari, J.Malone-Lee, E.Stride, M.Edirisinghe and J.L.Rohn, *J.Control. Release*, 328(2020)490-502.

Rapid and Label-free Detection of COVID-19 Using Coherent Anti-Stokes Raman Scattering Microscopy

T.A.Tabish, R.J.Narayan and M. Edirisinghe, *MRS Communications*, 10(2020)566-572.

A Novel Treatment Strategy for Preterm Birth: Intra-vaginal Progesterone-loaded Fibrous Patches

M.E.Cam, A.N.Hazar-Yavuz, S.Cesur, O.Ozkan, H.Alenezi, H.T.Sasmazel, M.S.Eroglu, F.Brako, J.Ahmed, L.Kabasakal, G.Ren, O.Gunduz and M. Edirisinghe, *Int. J. Pharmaceutics*, 588(2020)119782.

Effectiveness of Oil-layered Albumin Microbubbles Produced using Microfluidic T-junctions in Series for *In Vitro* Inhibition of Tumor Cells

A.H.Khan, X.Jiang, S.Surwase, M.Gultekinoglu, C.Bayram, I.Sathisaran, Dhiraj Bhatia, J.Ahmed, B.Wu, K.Ulubayram, M. Edirisinghe and S.V.Dalvi, *Langmuir*, 36(2020)11429-11441.

Generation of Core–sheath Polymer Nanofibers by Pressurised Gyration

S.Mahalingam, S.Huo, S.Homer-Vanniasinkam and M.Edirisinghe, *Polymers*,12(2020)1709.

**[Work featured on the cover of the journal and in Cover Paper Promotion Project, see [https://twitter.com/Polymers\\_MDPI/status/1364119803384852480](https://twitter.com/Polymers_MDPI/status/1364119803384852480)]**

The Comparison of Glybenclamide and Metformin-loaded Bacterial Cellulose/gelatin Nanofibres Produced by a Portable Electrohydrodynamic Gun for Diabetic Wound Healing  
M.E.Cam, M.Crabbe-Mann, H.Alenezi, A.N.Hazar-Yavuz, B.Ertas, C.Ekentok, G.S.Ozcan, F.Topal, E.Guler, Y.Yazir, M.Parhizkar and M.Edirisinghe, *Eur. Polym. J.*,134(2020)109844.

Viral Filtration Using Carbon-Based Materials  
R.K.Matharu, H.Porwal, B.Chen, L.Ciric and M.Edirisinghe, *Medical Devices & Sensors*, 3(2020)e10107.

Poly(Caprolactone)-Poly(N-Isopropyl Acrylamide)-Fe<sub>3</sub>O<sub>4</sub> Magnetic Nanofibrous Structure with Stimuli Responsive Drug Release  
S.Gholami, S.Labbaf, A.Kermanpur A.B.Houreh Chaojie Luo, M.Edirisinghe and H.N.Esfahani, *Macromolecular Mater. & Eng.*, 305(2020)2000208.

Comparative Study of the Antimicrobial Effects of Tungsten Nanoparticles and Tungsten Nanocomposite Fibres on Hospital Acquired Bacterial and Viral Pathogens  
R.K.Matharu, L.Ciric, G.Ren and M.Edirisinghe, *Nanomaterials*, 10(2020)10061017.

Microstructure of Fibres Pressure-spun from Polyacrylonitrile–graphene oxide Composite Mixtures  
A.Amir, H.Porwal, S.Mahalingam, X.Wu, T.Wu, B.Chen, T.A.Tabish and M.Edirisinghe, *Composites Science and Technology*, 197(2020)108214.

Bacterial Cellulose Micro-nano Fibres for Wound Healing Applications  
J.Ahmed, M.Gultekinoglu and M.Edirisinghe, *Biotechnology Advances*, 41, July–August(2020)107549.

COVID-19: Facemasks, Healthcare Policies and Risk Factors in the Crucial Initial Months of a Global Pandemic  
J. Ahmad, A.Harker and M.Edirisinghe, *Medical Devices & Sensors*, 3(2020)e10120.

A Portable Device for the Generation of Drug-Loaded Three-Compartmental Fibers Containing Metronidazole and Iodine for Topical Application  
F.Brako, C.J.Luo, R.K.Matharu, L.Ciric, A.Harker, M.Edirisinghe and D.Q.M. Craig, *Pharmaceutics*,12(2020)373.

Microstructure and Antibacterial Efficacy of Graphene Oxide Nanocomposite Fibres  
R.K.Matharu, T.A.Tabish, T.Trakoolwilaiwan, J.Mansfield, J.Moger, T.Wu, C.Lourenço, B.Chen, L.Ciric, I.P.Parkin and M.Edirisinghe  
*Journal of Colloid and Interface Science*, 571(2020)239-252.

Self-assembled Micro-stripe Patterning of Sessile Polymeric Nanofluid Droplets  
M.Gultekinoglu, X.Jiang, C.Bayram, H.Wu, K.Ulubayram and M.Edirisinghe  
*Journal of Colloid and Interface Science*, 561(2020)470-480.

Evaluation of Burst Release and Sustained Release of Pioglitazone-loaded Fibrous Mats on Diabetic Wound Healing: an *In vitro* and *In vivo* Comparison Study  
M.E.Cam, S.Yildiz, H.Alenezi, S.Cesur, G.S.Ozcan, G.Erdemir, U.Edirisinghe, D.Akakin, D.S.Kuruca, L.Kabasakal, O.Gunduz and M.Edirisinghe  
*J. Royal Soc. Interface*,17(2020)20190712.

Enhanced Efficacy in Drug-resistant Cancer Cells through Synergistic Nanoparticle Mediated Delivery of Cisplatin and Decitabine  
M.Parhizkar, P.J.T.Reardon, A.H.Harker, R.J.Browning, E.Stride, R.B.Pedley, J.C.Knowles and M.Edirisinghe, *Nanoscale Advances* 2(2002)1177-1186.

Copolymer Composition and Nanoparticle Configuration Enhance in vitro Drug Release Behavior of Poorly Water-soluble Progesterone for Oral Formulations  
Y.Zhang, R.Zhang, U.E.Illangakoon, A.H.Harker, C.Thrasivoulou, M.Parhizkar, M.Edirisinghe and C.J.Luo  
*Int. J. Nanomedicine*, 15(2020) 5389–5403.

Videographic Analysis of Blink Dynamics following Upper Eyelid Blepharoplasty and Its Association with Dry Eye  
F.H.W.Mak, M.Ting, M.R.Edmunds, A.Harker, M.Edirisinghe, S.Duggineni, F.Murta and D.G.Ezra, *Plastic and Reconstructive Surgery Global Open*, 8(2020) e2991.

## 2019

Biofabrication of Gelatin Tissue Scaffolds with Uniform Pore Size via Microbubble Assembly  
C.Bayram, X.Jiang, M.Gultekinoglu, S.Ozturk, K.Ulubayram and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 34(2019)1900394.  
**[Work featured on the cover of the journal]**

Experimental and Theoretical Investigation of the Fluid Behavior During Polymeric Fiber Formation with and without Pressure  
H.Alenezi, M.E.Cam and M.Edirisinghe, *Applied Physics Reviews*, 6(2019)041401.  
**[INVITED FEATURED ARTICLE: Work news-reported in EurekaAlert 15th October 2019 and many other news agencies]**

Preparation of Poly (glycerol sebacate) Fibers for Tissue Engineering Applications  
M.Gultekinoglu, Ş.Öztürk, B.Chen, M.Edirisinghe and K.Ulubayram, *Euro.Polym.J.*, 121(2019)109297.

Fiber Forming Capability of Binary and Ternary Compositions in the Polymer System: Bacterial Cellulose–Polycaprolactone–Polylactic Acid  
M.O.Aydogdu, E.Altun, J.Ahmed, O.Gunduz and M.Edirisinghe, *Polymers*, 11(2019)1148.

Empirical Modelling and Optimization of Pressure-coupled Infusion Gyration Parameters for the Nanofibre Fabrication  
X.Hong, A.Harker and M.Edirisinghe, *Proceedings of the Royal Society*, A475(2019)20190008.  
**[Work featured on the cover of the journal]**

Novel Pressurised Gyration Device for Making Core-Sheath Polymer Fibres  
S.Mahalingam, S.Homer-Vanniasinkam and M.Edirisinghe, *Materials & Design*, 178(2019)107846.

Bioinspired Scaffold Induced Regeneration of Neural Tissue  
E.Altun, M.O.Aydogdu, S.O.Togay, A.Z.Sengil, N.Ekren, M.E.Haskoylu, E.T.Oner, N.A.Altuncu, G.Ozturk, M.Crabbe-Mann, J.Ahmed, O.Gunduz and M.Edirisinghe, *Euro.Polym.J.*, 114(2019)98-108.

PEEK Surface Modification by Fast Ambient-temperature Sulfonation for Bone Implant Applications

W.Wang, C.J.Luo, J.Huang and M.Edirisinghe, *J.Roy. Soc. Interface*, 16(2019)20180955.

Electrosprayed Microparticles: A Novel Drug Delivery Method

M.E.Cam, Y.Zhang and M.Edirisinghe, *Expert Opinion on Drug Del.*, 16(2019) 895-901.

**[INVITED EDITORIAL]**

Microbubbles: Exploring Gas-liquid Interfaces for Biomedical Applications

M.Edirisinghe and S.Dalvi, *Langmuir*, 35(2019) 9995-9996.

**[INVITED SPECIAL ISSUE on Microbubbles a New Medical Frontier, EDITORIAL, Work featured on the cover of the journal]**

The Influence of Drug Solubility and Sampling Frequency on Metformin and Glibenclamide Release from Double-layered Particles: Experimental Analysis and Mathematical Modelling

T.Shams, F.Brako, S.Huo, A.H.Harker, U.Edirisinghe and M.Edirisinghe, *J.Roy. Soc. Interface*, 16(2019)20180237.

Electrospinning Optimization of Eudragit E PO with and without Chlorpheniramine Maleate Using a Design of Experiment Approach

H.E.Abdelhakim, A.Coupe, C.Tuleu, M.Edirisinghe and D.Q.M.Craig, *Molecular Pharmaceutics*, 16(2019)2257-2568.

Boron Nitride Nanoscrolls: Structure, Synthesis, and Applications

M.S.Qayyum, H.Hayat, R.K.Matharu, T.A.Tabish and M.Edirisinghe, *Applied Physics Reviews*, 6(2019)021310.

**[INVITED FEATURED REVIEW]**

Anti-fungal Bandages Containing Cinnamon Extract

J.Ahmed, E.Altun, M.O.Aydogdu, O.Gunduz, L.Kerai, G.Ren and M.Edirisinghe, *Int. Wound J.*, 16(2019)730-736.

Effect of the Mixing Region Geometry and Collector Distance on Microbubble Formation in a Microfluidic Device Coupled with ac–dc Electric Fields

A.Kothandaraman, Y.Alfadhl, M.Qureshi, M.Edirisinghe and Y.Ventikos, *Langmuir*, 35(2019)10052-10060.

General Computational Methodology for Modeling Electrohydrodynamic Flows: Prediction and Optimization Capability for the Generation of Bubbles and Fibers

B.Aramide, A.Kothandaraman, M.Edirisinghe, S.N.Jayasinghe and Y.Ventikos, *Langmuir*, 35(2019) 10203-10212.

Generating Antibacterial Microporous Structures Using Microfluidic Processing

C.Katsakouli, X.Jiang, W.K.Lau, J.L.Rohn and M.Edirisinghe, *ACS Omega*, 4(2019)2225-2233.

Co-Culture of Keratinocyte-Staphylococcus aureus on Cu-Ag-Zn/CuO and Cu-Ag-W Nanoparticle Loaded Bacterial Cellulose:PMMA Bandages

E Altun, MO Aydogdu, M Crabbe-Mann, J Ahmed, F Brako, B Karademir, B.Aksu, M.Sennaroglu, M.S.Eroglu, G.Ren, O.Gunduz and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 304(2019)1800537.

**2018**

Fiber Formation from Silk Fibroin Using Pressurized Gyration

PL Heseltine, J Hosken, C Agboh, D Farrar, S Homer-Vanniasinkam and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 303(2018)1800577.

Effect of Copolymer Composition on Particle Morphology and Release Behavior in vitro Using Progesterone

Y.Zhang, T.Shams, A.H.Harker, M.Parhizkar and M.Edirisinghe, *Materials & Design*,59(2018)57-67.

Novel Preparation of Monodisperse Microbubbles by Integrating Oscillating Electric Fields with Microfluidics

A.Kothandaraman, A.Harker, Y.Ventikos and M.Edirisinghe, *Micromachines*, 9(2018)497.

*\*Invited Feature: Developments in Pressurized Gyration for the Mass Production of Polymeric Fibers*

P.L.Heseltine, J.Ahmed and M.Edirisinghe, *Macromolecular Mater. & Eng.*,303(2018)1800218.

***[INVITED FEATURE ARTICLE: Work featured on the cover of the journal & reported in Advanced Science News July 23 2018, & SELECTED AS BEST OF MACROS 2019]***

Electrosprayed Microparticles for Intestinal Delivery of Prednisolone

T.Shams, U.E.Illangakoon, M.Parhizkar, A.H.Harker, S.Edirisinghe, M.Orlu and M.Edirisinghe, *J.Roy. Soc. Interface*,15(2018)20180491.

Antimicrobial Activity of Tellurium-loaded Polymeric Fiber Meshes

R.K.Matharu, Z.Charani, L. Ciric, U.E.Illangakoon and M.Edirisinghe, *J.Applied Polym.Sci.*, 135(2018)46368.

***[Work featured on the cover of the journal]***

The Biomedical Applications of Graphene

M.Edirisinghe, *Interface Focus*, 8(2018)20180006.

***[INVITED SPECIAL ISSUE EDITORIAL]***

*\*Invited: The Effect of Graphene–Poly (methyl methacrylate) Fibres on Microbial Growth*

R.K.Matharu, H.Porwal, L.Ciric and M.Edirisinghe, *Interface Focus*,8(2018)20170058.

***[Work featured on the cover of the journal]***

Cellular Interactions with Bacterial Cellulose: Polycaprolactone Nanofibrous Scaffolds Produced by a Portable Electrohydrodynamic Gun for Point-of-Need Wound Dressing

M.O.Aydogdu, E.Altun, M.Crabbe-Mann, F.Brako, F.Koc, G.Ozen, S.E.Kuruca, U.Edirisinghe, C.J.Luo, O.Gunduz and M.Edirisinghe, *Int. Wound J.*, 15(2018)787-797.

Process Modeling for the Fiber Diameter of Polymer, Spun by Pressure-Coupled Infusion Gyration

X.Hong, A.Harker and M.Edirisinghe, *ACS Omega*, 3(2018)5470-5479.

*Invited Topical Review: Nanocomposites: Suitable Alternatives as Antimicrobial Agents*

R.K.Matharu, L.Ciric and M.Edirisinghe, *Nanotechnology*,29(2018)282001.

\*Honeycomb-like PLGA-b-PEG Structure Creation with T-junction Micro Droplets  
M.Gultekinoglu, X.Jiang, C.Bayram, K.Ulubayram and M.Edirisinghe,  
*Langmuir*, 34(2018) 7989–7997.

**[Work featured on the cover of the journal]**

An Inexpensive, Portable Device for Point-of-Need Generation of Silver-Nanoparticle  
Doped Cellulose Acetate Nanofibers for Advanced Wound Dressing

F.Brako, C.Luo, D.Q.M. Craig and M.Edirisinghe, *Macromolecular Mater. & Eng.*,  
303(2018)1700586.

A Comparison of Electric-Field-Driven and Pressure-Driven Fiber Generation Methods for  
Drug Delivery

J.Ahmed, R.K.Matharu, T.Shams, U.E.Illangakoon and M.Edirisinghe, *Macromolecular  
Mater. & Eng.*, 303(2018)1700577.

**[Work featured on the cover of the journal]**

Polymer–Magnetic Composite Fibers for Remote-Controlled Drug Release

A.S.Perera, S.Zhang, S.Homer-Vanniasinkam, M.O.Coppens and M.Edirisinghe, *ACS  
Appl. Mater. & Interfaces*, 10(2018)15524-15531.

The Development of Progesterone-loaded Nanofibers Using Pressurized Gyration: A  
Novel Approach to Vaginal Delivery for the Prevention of Pre-term Birth

F.Brako, B.T.Raimi-Abraham, S.Mahalingam, D.Q.M.Craig and M.Edirisinghe, *Int.  
J.Pharmaceutics*,540(2018)31-39.

Alginate Foam-based Three-dimensional Culture to Investigate Drug Sensitivity in Primary  
Leukaemia Cells

M.Karimpoor, E.Yebra-Fernandez, M.Parhizkar, M.Orlu, D.Craig, J.S.Khorashad and  
M.Edirisinghe, *J.Roy. Soc. Interface*,15(2018)20170928.

\*Mucoadhesion of Progesterone-Loaded Drug Delivery Nanofiber Constructs

F.Brako, R.Thorogate, S.Mahalingam, B.Raimi-Abraham, D.Q.M. Craig and M.Edirisinghe,  
*ACS Appl. Mater. & Interfaces*,10(2018)13381-13389.

Ethyl Cellulose, Cellulose Acetate and Carboxymethyl Cellulose Microstructures Prepared  
Using Electrohydrodynamics and Green Solvents

M.Crabbe-Mann, D.Tsaoulidis, M.Parhizkar and M.Edirisinghe,  
*Cellulose*, 25(2018)1687-1703.

Novel Making of Bacterial Cellulose Blended Polymeric Fiber Bandages

E.Altun, MO Aydogdu, F Koc, M Crabbe-Mann, F Brako, R Kaur-Matharu, G.Ozen,  
S.E.Kuruca, U.Edirisinghe, O.Gunduz and M.Edirisinghe,  
*Macromolecular Mater. & Eng.*,303(2018)1700607.

**[Work featured on the cover of the journal and most downloaded in 2018]**

A Comparison of Methods to Assess the Antimicrobial Activity of Nanoparticle  
Combinations on Bacterial Cells

C.Bankier, Y.Cheong, S.Mahalingam, M.Edirisinghe, G.Ren, E.Cloutman-Green and  
L.Ciric, *PLoS One*,13(2018), Article e0192093.



Latest Developments in Innovative Manufacturing to Combine Nanotechnology with Healthcare

M.Parhizkar, S.Mahalingam, S.Homer-Vanniasinkam and M.Edirisinghe, *Nanomedicine*, 13(2018)5-8.

**[INVITED EDITORIAL]**

Poly(3-hydroxyoctanoate), a Promising New Material for Cardiac Tissue Engineering

A.V.Bagdadi, M.Safari, P.Dubey, P.Basnett, P.Sofokleous, E.Humphrey, I.Locke, M.Edirisinghe, C.Terracciano, A.R.Boccaccini, J.C.Knowles, S.E.Harding and I.Roy, *J.Tissue Engineering & Regenerative Medicine*, 12(2018)e495-e512.

## 2017

Development of Artificial Bone Marrow Fibre Scaffolds to Study Resistance to Anti-leukaemia Agents

M.Karimpoor, E.Illangakoon, A.G.Reid, S.Claudiani, M.Edirisinghe and J.S.Khorashad, *Br.J.Haemo.*, 182(2017)924-927.

Development of Foam-Based 3-Dimensional Culture to Investigate Drug Sensitivity in Primary Leukaemia Cells

M.Karimpoor, E.Yebra-Fernandez, M.Parhizkar, M.Orlu, D.Craig M.Edirisinghe and J.S.Khorashad, *Blood*, 130(2017)3824.

Electrohydrodynamic Fabrication of Core-shell PLGA Nanoparticles with Controlled Release of Cisplatin for Enhanced Cancer Treatment

P.J.T.Reardon, M.Parhizkar, A.H.Harker, R.J. Browning, V.Vassileva, E.Stride, R.B.Pedley, M.Edirisinghe and J.C.Knowles, *Int.J.Nanomed.*, 12(2017)3913-3926.

Core/shell Microencapsulation of Indomethacin/paracetamol by Co-axial Electrohydrodynamic Atomization

T.Shams, M.Parhizkar, U.E.Illangakoon, M.Orlu and M.Edirisinghe, *Materials & Design*, 136(2017)204-213.

Evolution of Self-generating Porous Microstructures in Polyacrylonitrile cellulose acetate Blend Fibres

S.Mahalingam, X.Wu and M.Edirisinghe, *Materials & Design*, 136(2017)259-271.

Evolution of Surface Nanopores in Pressurised Gyrospun Polymeric Microfibers

U.E.Illangakoon, S.Mahalingam, R.K.Matharu and M.Edirisinghe, *Polymers*, 9(2017)508 (11 pages).

Drug Delivery Strategies for Platinum-Based Chemotherapy

R.J.Browning, P.J.T. Reardon, M.Parhizkar, R.B.Pedley, M.Edirisinghe, J.C.Knowles and E.Stride, *ACS Nano*, 11(2017)8560-8578.

Characterisation of the Chemical Composition and Structural Features of Novel Antimicrobial Nanoparticles

Y.K.Cheong, J.Calvo-Castro, L.Ciric, M.Edirisinghe, E.Cloutman-Green, U.E.Illangakoon, Q.Kang, S.Mahalingam, R.K.Matharu, R.M.Wilson and G.Ren, *Nanomaterials*, 7(2017)152 (16 pages).

Highly Stretchable and Highly Resilient Polymer-clay Nanocomposite Hydrogels with Low Hysteresis  
X.Su, S.Mahalingam, M.Edirisinghe and B.Chen, *ACS Appl. Mater. & Interf.*, 9(2017) 22223–22234.

The Generation of Compartmentalized Nanoparticles Containing SiRNA and Cisplatin using a Multi-Needle Electrohydrodynamic Strategy  
F.Pina, K.W.Lau, K.Scherer, M.Parhizkar, M.Edirisinghe and D.Craig, *Nanoscale*, 9(2017)5975-5985

Simultaneous Application of Pressure-Infusion-Gyration to Generate Polymeric Nanofibers  
X.Hong, S.Mahalingam and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 302(2017)1600564.

**[Work featured on the cover of the journal & SELECTED AS BEST OF MACROS 2018]**

Performance of Novel High Throughput Multi Electro Spray Systems for Forming of Polymeric Micro/nanoparticles  
M.Parhizkar, P.J.T.Reardon, J.C.Knowles, R.J.Browning, E.Stride, R.B.Pedley, T.Gregg and M.Edirisinghe, *Materials & Design*, 126(2017)73-84.

New Generation of Tunable Bioactive Shape Memory Mats Integrated with Genetically Engineered Proteins  
X.Wu, S.Mahalingam, S.VanOosten, C.Wisdom, C.Tamerler and M.Edirisinghe, *Macromol. Biosci.*, 17(2017)1600270.

**[Work featured on the cover of the journal]**

Gyrospon Antimicrobial Nanoparticle Loaded Fibrous Polymeric Filters  
U.E.Illangakoon, S.Mahalingam, K.Wang, Y-K Cheong, E.Canales, G.G.Ren, E.Cloutman-Green, M.Edirisinghe and L.Ciric, *Mater. Sci. Eng. C*, 74(2017)315-324.

The Mechanics of Brow-suspension Ptosis Repair: A Comparative Study of Fox Pentagon and Crawford Triangle Techniques  
K.-a. Kwon, R.J.Shipley, M.Edirisinghe, S.M.Best, R.E.Cameron, C.Poitelea, G.E.Rose and D.G.Ezra, *Ophthalmic Plastic & Reconstructive Surgery*, 33(2017)22-26.

Preparation of Nano-and Microstructures For Drug Delivery  
Z.Ahmad and M.Edirisinghe, *AAPS Pharm.Sci.Tech.*, 18(2017)1427.

**[INVITED EDITORIAL]**

## **2016**

*Invited Topical Review: Application of Nanotechnology for the Development of Microbicides*

F.Brako, B.T.Raimi-Abraham, S.Mahalingam, D.Q.M.Craig and M.Edirisinghe, *Nanotechnology*, 28(2016) 052001.

Porous Polymeric Films from Microbubbles Generated Using a T-Junction Microfluidic Device

M.Elsayed, A.Kothandaraman, M.Edirisinghe and J.Huang, *Langmuir* 32(2016)3377-13385.

Manufacturing Man-Made Magnetosomes: High-Throughput In Situ Synthesis of Biomimetic Magnetite Loaded Nanovesicles  
P.K.Bakhshi, J.Bain, M.Orlu-Gul, E.Stride, M.Edirisinghe and S.S.Staniland, *Macromol. Biosci.*, 16(2016)1555-1561.

**[Work featured on the cover of the journal]**

Tailoring the Surface of Polymeric Nanofibres Generated by Pressurised Gyration  
U.E.Illangakoon, S.Mahalingam, P.Colombo and M.Edirisinghe, *Surf. Innov.*,4(2016)167-178.

Electrosprayed Nanoparticle Delivery System for Controlled Release  
M.Eltayeb, E.Stride, M.Edirisinghe and A.Harker, *Mater. Sci. Eng. C*, 66(2016)138-146.

The Effect of Needle Tip Displacement in Co-axial Electrohydrodynamic Processing  
P.Sofokleous, W.K.Lau, M.Edirisinghe and E.Stride, *RSC Advances*, 6(2016)75258-75268.

Combining Microfluidic Devices with Coarse Capillaries to Reduce the Size of Monodisperse Microbubbles  
X.Jiang, Y.Zhang, M.Edirisinghe and M.Parhizkar, *RSC Advances* 6(2016)63568-63577.

Novel Preparation, Microstructure, and Properties of Polyacrylonitrile-based Carbon Nanofiber–graphene Nanoplatelet Materials  
X.Wu, S.Mahalingam, A.Amir, H.Porwal, M.J.Reece, V.Naglieri, P.Colombo and M.Edirisinghe, *ACS Omega*, 1(2016)202-211.

Beads, Beaded-fibres and Fibres: Tailoring the Morphology of Poly(caprolactone) using Pressurised Gyration  
X.Hong, M.Edirisinghe and S.Mahalingam, *Mater. Sci. Eng. C*, 69(2016)1373-1382.

Electrohydrodynamic Encapsulation of Cisplatin in Poly(lactic-co-glycolic acid) Nanoparticles for Controlled Drug Delivery  
M.Parhizkar, P.J.T.Reardon, J.C.Knowles, R.J.Browning, E.Stride, B.R.Pedley, A.Harker and M.Edirisinghe, *Nanomedicine: Nanotechnology, Biology and Medicine*, 12(2016)1919-1929.

Graphene Nanoplatelets Loaded Polyurethane and Phenolic Resin Fibres by Combination of Pressure and Gyration  
A.Amir, S.Mahalingam, X.Wu, H.Porwal, P.Colombo, M.J.Reece and M.Edirisinghe, *Comp.Sci.Tech.*, 129(2016)173-182.

Preparation of Bone-implants by Coating Hydroxyapatite Nanoparticles on Self-formed Titanium Dioxide Thin-layers on Titanium Metal Surfaces  
W.P.S.L.Wijesinghe, M.M.M.G.P.G.Mantilaka, K.G.Chathuranga Senarathna, H.M.T.U.Herath, T.N.Premachandra, C.S.K.Ranasinghe, R.P.V.J.Rajapakse, R.M.G.Rajapakse, M.Edirisinghe, S.Mahalingam, I.M.C.C.D.Bandara, Sanjleena Singh, *Mater. Sci. Eng. C*, 63(2016)172-184.

Making Nonwoven Fibrous Poly ( $\epsilon$ -caprolactone) Constructs for Antimicrobial and Tissue Engineering Applications by Pressurized Melt Gyration  
Z.Xu, S.Mahalingam, P.Basnett, B.Raimi-Abraham, I.Roy, D.Craig and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 301(2016)922-934.

**[Work featured on the cover of the journal]**

Investigating the Particle to Fibre Transition Threshold during Electrohydrodynamic Atomization of a Polymer Solution  
O.Husain, W.Lau, M.Edirisinghe and M.Parhizkar, *Mater. Sci. Eng. C*, 65(2016)240-250.

Analysis of Blink Dynamics in Patients with Blepharoptosis  
F.H.W.Mak, A.Harker, K.-a.Kwon, M.Edirisinghe, G.E.Rose, F.Murta and D.Ezra, *J. Royal Soc. Interface*, 13(2016), 20150932.

Fabrication of Bespoke Nasal Septal Scaffolds  
S.H.Hashimdeen, R.Thorogate, M.Miodownik and M.J.Edirisinghe  
*Materials & Design*, 90(2016)403-409.

## 2015

Development and Characterization of Amorphous Nanofiber Drug Dispersions Prepared Using Pressurized Gyration  
B.T.Raimi-Abraham, S.Mahalingam, P.J. Davies, M.Edirisinghe and D.Q.M.Craig, *Mol. Pharmaceutics*, 12(2015)3851-3861.

Antibacterial Activity and Biosensing of PVA-Lysozyme Microbubbles Formed by Pressurized Gyration  
Z. Xu, S. Mahalingam and M. Edirisinghe, *Langmuir*, 31(2015)9771-9780.

Solubility–spinnability Map and Model for the Preparation of Fibres of Polyethylene(terephthalate) using Gyration and Pressure  
S.Mahalingam, B.T.Raimi-Abraham, D.Q.M.Craig and M.Edirisinghe, *Chem.Eng.J.*, 280(2015)344-353.

Coupling Infusion and Gyration for the Nanoscale Assembly of Functional Polymer Nanofibers Integrated with Genetically Engineered Proteins  
S.Zhang, B.T.Karaca, S.K.VanOosten, E.Yuca, S.Mahalingam, M.Edirisinghe and C.Tamerler, *Macromol. Rapid Comm.*, 36(2015)1322-1328.

**[Work featured on the cover of the journal]**

Making Nanofibres of Mucoadhesive Polymer Blends for Vaginal Therapies  
F.Brako, B.T.Raimi-Abraham, S.Mahalingam, D.Q.M.Craig and M.Edirisinghe, *Euro.Polym. J.* 70(2015)186-196.

Physio-chemical and Antibacterial Characteristics of Pressure Spun Nylon Nanofibres Embedded with Functional Silver Nanoparticles  
Z. Xu, S. Mahalingam, J.L. Rohn, G. Ren and M. Edirisinghe, *Mater. Sci. Eng. C*, 56(2015)195-204.

The Effect of Surfactant Type and Concentration on the Size and Stability of Microbubbles Produced in a Capillary Embedded T-junction Device  
M.Parhizkar, M.Edirisinghe and E.Stride, *RSC Advances*, 5(2015)10751-10762.

Pharmaceutical Microparticle Engineering with Electro spraying: The Role of Mixed Solvent Systems in Particle Formation and Characteristics  
A.Bohr, F.Wan, J.Kristensen, M.Dyas, E.Stride, S.Baldursdottir, M.Edirisinghe and M.Yang, *J.Mater.Sci.:Mater.in Med.*, 26(2015) Article61 (13 pages)

Stress-relaxation and Fatigue Behaviour of Synthetic Brow-suspension Materials  
K.-a. Kwon, R.J.Shipley, M.Edirisinghe, A.W.Rayment, S.M.Best, R.E.Cameron, G.E.Rose and D.G.Ezra, *J. Mech. Beh. Biomed. Mater.*, 42(2015)116-128.

Changing the Size and Surface Roughness of Polymer Nanospheres Formed Using a Microfluidic Technique  
I.Kucuk and M.Edirisinghe, *JOM*, 67(2015)811-817.

Facile One-pot Formation of Ceramic Fibres from Pre ceramic Polymers by Pressurised Gyration  
S.Mahalingam, G.Pierin, P.Colombo and M.Edirisinghe, *Ceram. International*, 41(2015)6067-6073.

Preparation, Characterization and Release Kinetics of Ethylcellulose Nanoparticles Encapsulating Ethylvanillin as a Model Functional Component  
M.Eltayeb, E.Stride and M.Edirisinghe, *J. Functional Foods*, 14(2015)726-735.

Formation of Protein and Protein–Gold Nanoparticle Stabilized Microbubbles by Pressurized Gyration  
S.Mahalingam, B.T.Raimi-Abraham, D.Q.M.Craig and M.Edirisinghe, *Langmuir*, 31(2015)659-666.

**[Work featured on the cover of the journal]**

Preparation of Polymeric Nanoparticles by Novel Electro spray Nanoprecipitation  
C J Luo, T.Okubo, M.Nangrejo and M.Edirisinghe, *Polym. International*, 64(2015)183-187.

Bioinspired Preparation of Alginate Nanoparticles using Microbubble Bursting  
M.EISayed, J.Huang and M.Edirisinghe, *Mater. Sci. Eng. C*, 46(2015)132-139.

Bioinspired Electrohydrodynamic Ceramic Patterning of Curved Metallic Substrates  
A.Nithyanandan, S.Mahalingam, J.Huang, S.Rehman, E.Draper and M.Edirisinghe, *Bioinspired, Biomimetic and Nanobiomaterials*, 4(2015)659-666.

## **2014**

Core-Liquid-Induced Transition from Coaxial Electro spray to Electro spinning of Low-Viscosity Poly(lactide- co -glycolide) Sheath Solution  
C. J. Luo and M. Edirisinghe, *Macromolecules*, 47(2014)7930-7938.

Novel Preparation of Controlled Porosity Particle/Fibre Loaded Scaffolds using a Hybrid Micro-fluidic and Electrohydrodynamic Technique.  
M.Parhizkar, P.Sofokleous, E.Stride and M.Edirisinghe, *Biofabrication*, 6(2014) Article045010 (14 pages)

The Design and Construction of an Electrohydrodynamic Cartesian Robot for the Preparation of Tissue Engineering Constructs  
S.H.Hashimdeen, M.Miodownik and M.J.Edirisinghe, *PLoS One*, 9(2014) Article e112166.

Microfluidic preparation of polymer nanospheres

I.Kucuk and M.Edirisinghe, *J Nanopart. Res.*, 16(2014) Article2626 (9 pages)

A Portable Device for In Situ Deposition of Bioproducts

Wai K. Lau, P.Sofokleous, R.Day, E.Stride and M.Edirisinghe, *Bioinspired, Biomimetic and Nanobiomaterials*, 3(2015)94–105.

Effect of Humidity on the Generation and Control of the Morphology of Honeycomb-like Polymeric Structures by Electrospinning

T.Liang, M.Parhizkar, M.Edirisinghe and S.Mahalingam, *Euro.Polym.J.*, 61(2014)72-82.

Facile Synthesis of Both Needle-like and Spherical Hydroxyapatite Nanoparticles: Effect of Synthetic Temperature and Calcination on Morphology, Crystallite Size and Crystallinity

W.P.S.L. Wijesinghe, M.M.M.G.P.G. Mantilaka, E.V.A. Premalal, H.M.T.U. Herath, S. Mahalingam, M. Edirisinghe, R.P.V.J. Rajapakse, R.M.G. Rajapakse, *Mater. Sci. Eng. C*, 42(2014)83-90.

Utilization of Microfluidic V-junction Device to Prepare Surface Itraconazole Adsorbed Nanospheres

I.Kucuk, Z.Ahmad, M.Edirisinghe and M.Orlu-Gul, *Int. J. Pharmaceutics*,472(2014)339-346.

Rheology and Pressurised Gyration of Starch and Starch-loaded Poly(ethylene oxide)

S.Mahalingam, G.G.Ren and M.Edirisinghe, *Carbohydrate Polymers*, 114(2014)279-287.

Novel Encapsulation Systems and Processes for Overcoming the Challenges of Polypharmacy

M.Orlu-Gul, A.A.Topcu, T.Shams, S.Mahalingam and M.Edirisinghe, *Current Opinion in Pharmacology*, 18(2014)28-34.

Preparation of Monodisperse Microbubbles using an Integrated Embedded Capillary T-junction with Electrohydrodynamic Focusing

M.Parhizkar, E.Stride and M.Edirisinghe, *Lab on a Chip*, 14(2014)2437-2446.

Formation, Stability, and Mechanical Properties of Bovine Serum Albumin Stabilized Air Bubbles Produced Using Coaxial Electrohydrodynamic Atomization

S.Mahalingam, M.B.J.Meinders and M.Edirisinghe, *Langmuir*, 30(2014)6694-6703.

Preparation of Multilayered Polymeric Structures Using a Novel Four-Needle Coaxial Electrohydrodynamic Device

S.Labbaf, H.Ghanbar, E.Stride and M.Edirisinghe, *Macromol. Rapid Comm.*, 35(2014)618-623.

**[Work featured on the cover of the journal]**

Generation of Poly(N-vinylpyrrolidone) Nanofibres using Pressurised Gyration

B.T.Raimi-Abraham, S.Mahalingam, M.Edirisinghe, D.Q.M.Craig, *Mater. Sci. Eng. C*, 39(2014)168-176.

Microstructure and Mechanical Properties of Synthetic Brow-suspension Materials

K.-a. Kwon, R.J.Shipley, M.Edirisinghe, D.G.Ezra, G.E.Rose, A.W.Rayment, S.M.Best and R.E.Cameron, *Mater. Sci. Eng. C*, 35(2014)220-230.

## 2013

Electrosprayed Core-shell Polymer-lipid Nanoparticles for Active Component Delivery

M.Eltayeb, E.Stride and M.Edirisinghe, *Nanotechnology*, 24(2013) 465604.

Electrospinning of Ethyl Cellulose Fibres with Glass and Steel Needle Configurations

B.Ahmad, S.Stoyanov, E.Pelan, E.Stride and M.Edirisinghe, *Food Res. Intl.*, 54(2013)1761-1772.

Template-assisted Electrohydrodynamic Atomization of Polycaprolactone for Orthopedic Patterning Applications

A.Nithyanandan, S.Mahalingam, J.Huang, S.Rehman, E.Draper and M.Edirisinghe, *Mater. Sci. Eng. C*, 33(2013)4608-4615.

Preparation of Multicompartment Sub-micron Particles Using a Triple-needle Electrohydrodynamic Device

S.Labbaf, S.Deb, G.Cama, E.Stride and M.Edirisinghe, *J.Colloid & Interf. Sci.*, 409(2013) 245-254.

Preparation, Characterization, and Release of Amoxicillin from Electrospun Fibrous Wound Dressing Patches

P.Sofokleous, E.Stride and M.Edirisinghe, *Pharm. Res.*, 30(2013)1926-1938.

Forming of Polymer Nanofibers by a Pressurised Gyration Process

S.Mahalingam and M.Edirisinghe, *Macromol. Rapid Comm.*, 34(2013)1134-1139.

**[Work featured on the cover of the journal]**

Print Head Design and Control for Electrohydrodynamic Printing of Silk Fibroin

S.H.Hashimdeen, M.Miodownik and M.J.Edirisinghe, *Mater. Sci. Eng. C*, 33(2013)3309-3318.

Preparation of Solid Lipid Nanoparticles Containing Active Compound by Electrohydrodynamic Spraying

M.Eltayeb, P.K.Bakhshi, E.Stride and M.Edirisinghe, *Food Res. Intl.*, 53(2013)88-95.

Creating "Hotels" for Cells by Electrospinning Honeycomb-like Polymeric Structures

T.Liang, S.Mahalingam and M.Edirisinghe, *Mater. Sci. Eng. C*, 33(2013)4384-4391.

An Encapsulated Drug Delivery System for Recalcitrant Urinary Tract Infection

S.Labbaf, H.Horsley, M.-w. Chang, E.Stride, J. Malone-Lee, M.Edirisinghe and J.Rohn, *J. Royal Soc. Interface*, 10(2013) 20130747.

**[Work featured on the cover of the journal]**

High-speed Camera Characterization of Voluntary Eye Blinking Kinematics

K.-a. Kwon, R.J.Shipley, M.Edirisinghe, D.G.Ezra, G.Rose, S.M.Best and R.E.Cameron, *J. Royal Soc. Interface*, 10(2013) 20130227.

Ultrasound Mediated Release from Stimuli-responsive Core-shell Capsules

M.-w. Chang, M. Edirisinghe and E.Stride, *J.Mater.Chem. B*, 1(2013)3962-3971.

Electrohydrodynamic Bubbling: An Alternative Route to Fabricate Porous Structures of Silk Fibroin Based Materials

Z.Ekemen, Z.Ahmad, E.Stride, D.Kaplan and M.Edirisinghe, *Biomacromolecules*, 14(2013)1412-1422.

Electrohydrodynamic Printing of Silk Fibroin

C.Bayram, Z.Ahmad, E.B.Denkbas, E.Stride and M.Edirisinghe, *Macromol. Res.*, 21(2013)339-342.

Preparation of Porous Microsphere Scaffolds by Electrohydrodynamic Forming and Thermally Induced Phase Separation

H.Ghanbar, C.J.Luo, P.Bakhshi, R.Day and M.Edirisinghe, *Mater. Sci. Eng. C*, 33(2013)2488-2498.

Effect of Operating Conditions and Liquid Physical Properties on the Size of Monodisperse Microbubbles Produced in a Capillary Embedded T-junction Device

M.Parhizkar, M.Edirisinghe and E.Stride, *Microfluidics & Nanofluidics*, 14(2013)797-808.

Encapsulation of Superparamagnetic Iron Oxide Nanoparticles in Poly(lactide-co-glycolic acid) Microspheres for Biomedical Applications

S.Gun, M.Edirisinghe and E.Stride, *Mater. Sci. Eng. C*, 33(2013)3129-3137.

Application of Electrohydrodynamic Technology for Folic Acid Encapsulation

P.K.Bakhshi, M.R.Nangrejo, E.Stride and M.Edirisinghe, *J. Food & Bioprocess Technology*, 6(2013)1837-1846.

Novel Electrically Driven Direct-writing Methods with Managed Control on Insitu Shape and Encapsulation Polymer Forming

Z.Ahmad, M.Nangrejo, M.Rasekh, E.Stride and M.Edirisinghe, *Int.J.Mater. Forming*, 6(2013)281-288.

Ultrasound-stimulated Drug Release from Polymer Micro and Nanoparticles

M.Enayati, D Al Mohazey, M.Edirisinghe and E.Stride, *Bioinspired, Biomimetic and Nanobiomaterials*, 2(2013)3-10.

Continuous Generation of Ethyl Cellulose Drug Delivery Nanocarriers from Microbubbles

O.Gunduz, Z.Ahmad, E.Stride and M.Edirisinghe, *Pharm. Res.*, 30(2013)225-237.

Spatial and Temporal Evaluation of Cell Attachment to Printed Polycaprolactone Microfibers

M.Rasekh, Z.Ahmad, C.Frangos, L.Bozec, M.Edirisinghe and R.Day, *Acta Biomaterialia*, 9(2013)5052-5062.

## 2012

Effects of Gold Nanoparticles on the Stability of Microbubbles

G.Mohamedi, M.Azmin, I.Pastoriza-Santos, V.Huang, J.Pérez-Juste, L.Liz-Marzán, M.Edirisinghe, and E.Stride, *Langmuir*, 28(2012)13808-13815.

Design, Construction and Performance of a Portable Handheld Electrohydrodynamic Multi-needle Spray Gun for Biomedical Applications

P.Sofokleous, E.Stride, W.Bonfield and M.Edirisinghe, *Mater. Sci. Eng. C*, 33(2013)213-223.



Dissolution of Coated Microbubbles: The Effect of Nanoparticles and Surfactant Concentration

M. Azmin, G. Mohamedi, M. Edirisinghe and E.Stride, *Mater. Sci. Eng. C*, 32(2012)2654-2658.

Electrospinning of Ethyl Cellulose Fibres with a Heated Needle and Heated Air Using a Co-axial Needle: a Comparison

B. Ahmad, E.Stride, S. Stoyanov, E.Pelan, M.Edirisinghe, *Journal of Medical and Bioengineering*, 1(2012)1-4.

Electrospinning *versus* Fibre Production Methods: From Specifics to Technological Convergence

C. J. Luo, S.D.Stoyanov, E. Stride, E. Pelan and M. Edirisinghe *Chem. Soc. Rev.*, 41(2012)4708-4735.

Particle Formation and Characteristics of Celecoxib-loaded Poly(lactic-co-glycolic acid) Microparticles Prepared in Different Solvents using Electrospaying

A.Bohr, M.Yang, S.Baldursdóttir, J.Kristensen, M.Dyas, E.Stride and M.Edirisinghe. *Polymer*, 53(2012)3220-3229.

Release Profile and Characteristics of Electrospayed Particles for Oral Delivery of a Practically Insoluble Drug

A.Bohr, J.Kristensen, M.Dyas, M.Edirisinghe and E.Stride, *J. Royal Soc. Interface*, 9(2012)2437-2449.

Calcium Alginate Foams Prepared by a Microfluidic T-Junction System: Stability and Food Applications

B.Ahmad, E.Stride and M.Edirisinghe, *J. Food & Bioprocess Technology*, 5(2012)2848-2857.

Electrospaying and Electrospinning of Chocolate Suspensions

C.J.Luo, S. Loh, E.Stride and M. Edirisinghe, *J. Food & Bioprocess Technology*, 5(2012)2285-2300.

Mapping the Influence of Solubility and Dielectric Constant on Electrospinning Polycaprolactone Solutions

C. J. Luo, E. Stride, and M. Edirisinghe, *Macromolecules*, 45(2012)4669–4680.

A Device for the Fabrication of Multifunctional Particles from Microbubble Suspensions

O. Gunduz, Z.Ahmad, E.Stride and M.Edirisinghe, *Mater. Sci. Eng. C*, 32(2012)1005-1010.

A Novel Hybrid System for the Fabrication of a Fibrous Mesh with Micro-inclusions B.

Ahmad, O. Gunduz, S. Stoyanov, E.Pelan, E.Stride and M.Edirisinghe, *Carbohydrate Polymers*, 89(2012)222-229.

Cobalt-based Orthopaedic Alloys: Relationship between Forming Route, Microstructure and Tribological Performance

B.Patel, G.Favaro, F.Inam, M.J.Reece, A.Angadji, W.Bonfield, J.Huang and M.Edirisinghe, *Mater. Sci. Eng. C*, 32(2012)1222-1229.

Modification of the Release Characteristics of Estradiol Encapsulated in PLGA Particles via Surface Coating  
M.Enayati, E.Stride, M.Edirisinghe and W.Bonfield, *Therapeutic Delivery*, 3(2012)209-226.

How Do Microbubbles and Ultrasound Interact? Basic Physical, Dynamic and Engineering Principles  
M.Azmin, C.Harfield, Z.Ahmad, M.Edirisinghe and E.Stride, *Current Pharmaceutical Design*, 18(2012)2118-2134.

Electrohydrodynamic Processing of Calcium Phosphates for Coating and Patterning on Medical Implants  
G.Munir, J.Huang, R.Nangrejo, M.Edirisinghe and W.Bonfield, *Nano LIFE*, 2(2012) article no. 125008.

Hot Electrospinning of Polyurethane Fibres  
M.Nangrejo, F.Bragman, Z.Ahmad, E.Stride and M.Edirisinghe, *Materials Letters*, 68(2012)482-485.

Bio-inspired Bubble Design for Particle Generation. O.Gunduz, Z.Ahmad, E.Stride, C.Tamerler and M.Edirisinghe, *J. Royal Soc. Interface*, 9(2012)389-395.

## **2011**

Controlled Preparation of Drug-exchange Phase Loaded Polymeric Fibres by Coaxial Electrospinning  
P.Sofokleous, M-w.Chang, B.Ge, E.Stride and M.Edirisinghe, *Bioinspired, Biomimetic and Nanobiomaterials*, 1(2011)48-56.

Fabrication of Biomaterials via Controlled Protein Bubble Generation and Manipulation  
Z.Ekemen, H.Chang, Z.Ahmad, C.Bayram, Z.Rong, E.Denkbas, E.Stride, P.Vadgama, and M.Edirisinghe, *Biomacromolecules*, 12(2011)4291-4300.

Nano-organized Shells and their Application in Controlled Release  
M.-w. Chang, E. Stride and M. Edirisinghe, *Therapeutic Delivery*, 2(2011)1247-1257.

Effect of Deposition Parameters and Post-deposition Annealing on the Morphology and Cellular Response of Electrospayed TiO<sub>2</sub> Films  
T.Sebbowa, M.Edirisinghe, V.Salih and J.Huang, *Biofabrication*, 3(2011) article no. 045001.

Nanoparticle Delivery Systems Formed using Electrically Sprayed Co-flowing Excipients and Active Agent  
R.Bakhshi, Z.Ahmad, M.Soric, E.Stride and M.Edirisinghe, *J.Biomed. Nanotech.*, 7(2011)782-793.

Electrospinning Short Polymer Micro-fibres with Average Aspect Ratios in the Range of 10–200  
C. J. Luo, E. Stride, S. Stoyanov, E. Pelan and M. Edirisinghe, *J.Polymer Research*, 18(2011)2515-2522.

Direct Writing of Polycaprolactone Polymer for Potential Biomedical Engineering Applications

M.Rasekh, Z.Ahmad, R.Day , A.Wickam and M.Edirisinghe, *Adv. Eng. Mater. (Adv. Biomater.)*, 13(2011)B296-B305.

**[Work featured on the cover of the journal]**

Electrospray Deposition of Nanohydroxyapatite Coatings: A Strategy to Mimic Bone Apatite Mineral

E. S. Thian, X.Li, J. Huang, M. J. Edirisinghe, W.Bonfield and S. M. Best, W. Bonfield, *Thin Solid Films*, 519(2011)2328-2331.

An Electrically Driven Jetting Technique for Diverse High-resolution Surface Structures of Nanometre Hydroxyapatite Crystals

X.Li, J.Huang, M.Edirisinghe and W.Bonfield, *Colloids and Surfaces B*, 82(2011)562-570.

Preparation of Microspheres containing Low Solubility Drug Compound by Electrohydrodynamic Spraying

A.Bohr, J.Kristensen, E.Stride, M.Dyas and M.Edirisinghe. *Int. J. Pharmaceutics*, 412(2011)59-67.

Mechanism of Chromium Oxide Formation in cobalt-Chromium-Molybdenum (F75) Alloys Prepared using Spark plasma Sintering

B. Patel, F. Inam, M.J. Reece, M. Edirisinghe, W. Bonfield, J. Huang and A. Angadji, *Adv. Eng. Mater.*, 13(2011)411-417.

The Pathway to Intelligent Implants: Osteoblast Response to nano Silicon-doped Hydroxyapatite Patterning

G. Munir, J. Huang, M.J. Edirisinghe, G. Koller, L. Di Silvio, and W.Bonfield, *J. Royal Soc. Interface*, 8(2011)678-688.

Stimulus-responsive Liquids for Encapsulation Storage and Controlled Release of Drugs from Nano-shell Capsules

M.-w. Chang, E. Stride and M. Edirisinghe, *J. Royal Soc. Interface*, 8(2011)451-456.

Forming of Protein Bubbles and Porous Films using Co-axial Electrohydrodynamic Flow Processing

Z. Ekemen, Z. Ahmad, M. Edirisinghe and E.Stride. *Macromolecular Mater. & Eng.*, 296(2011)8-13.

**[Work featured on the cover of the journal]**

Electrohydrodynamic Preparation of Particles, Capsules and Bubbles for Biomedical Engineering Applications

M.Enayati, M-w. Chang, F.Bragman, M.Edirisinghe and E.Stride. *Colloids and Surfaces A*, 382(2011)154-164.

Electrohydrodynamic preparation of polymeric drug-carrier particles: Mapping of the Process

M.Enayati, U.Farook, M.Edirisinghe and E.Stride. *Int. J. Pharmaceutics*, 404(2011)110-115.

## 2010

A Novel Route for Processing Cobalt-Chromium-Molybdenum Orthopaedic Alloys  
B. Patel, F. Inam, M. Reece, M. Edirisinghe, W. Bonfield, J. Huang and A. Angadji, *J. Royal Soc. Interface*, 7(2010)1641-1645.

Ceramic Encapsulation with a Polymer via Co-axial Electrohydrodynamic Jetting  
M. Nangerjo, Z. Ahmad and M. Edirisinghe, *J. Microencap.*, 27(2010)542-551.

Size Mapping of Electric Field-assisted Production of Polycaprolactum Particles  
M. Enayati, Z. Ahmad, E. Stride and M. Edirisinghe, *J Royal Soc. Interface*, 7 (2010) S393-S404.

[IN SPECIAL ISSUE ON SCALING THE HEIGHTS—CHALLENGES IN MEDICAL MATERIALS, ORGANISED BY Edirisinghe, M. & Stride, E.]

Controlling the Thickness of Hollow Polymeric Microspheres Prepared by Electrohydrodynamic Atomization

M.-w. Chang, E. Stride and M. Edirisinghe. *J. Royal Soc. Interface*, 7(2010) S377-S378.

[IN SPECIAL ISSUE ON SCALING THE HEIGHTS—CHALLENGES IN MEDICAL MATERIALS, ORGANISED BY Edirisinghe, M. & Stride, E.]

Can Oceanic Foams Limit Global Warming?

J.R.G. Evans, E.P.J. Stride, M.J. Edirisinghe, D.J. Andrews and R.R. Simons, *Climate Research*, 42 (2010) 155-160.

Preparation of a Micro-porous Alginate Gel using a Microfluidic Bubbling Device

S. Martynov, X.L. Wang, E.P. Stride and M.J. Edirisinghe, *Int. J. Food Eng.*, 6 (2010) issue3, article number 8.

Generation of Ceramic-Ceramic Layered Composite Microstructures using Electrohydrodynamic Co-axial Flow

M. Nangerjo, Z. Ahmad and M. Edirisinghe, *Ceram. International*, 36 (2010) 1217-1223.

Electrohydrodynamic Direct Writing of Biomedical Polymers and Composites

Z. Ahmad, M. Rasekh and M. Edirisinghe, *Macromol. Mater. and Eng.*, 295 (2010) 315-319.

**[Work featured on the cover of the journal]**

A New Method for the Preparation of Monoporous Hollow Microspheres

M-w. Chang, E. Stride and M. Edirisinghe, *Langmuir*, 26 (2010) 5115-5121.

A Novel Method of Selecting Solvents for Polymer Electrospinning

C.J. Luo, M. Nangrejo and M. Edirisinghe, *Polymer*, 51 (2010) 1654-1662.

Fabrication of Nano-porous Chitosan Membranes

X. Wang, X. Li, E. Stride, M. Edirisinghe, *NANO*, 5(2010)53-60.

Improvement of Microstructure and Mechanical Properties of Bioceramic Scaffolds using Electrohydrodynamic Spraying with Template Modification

A. Muthutantri, M. Edirisinghe, and A. Boccaccini, *J. Mech. Behav. Biomed. Mater.*, 3(2010)230-239.

### Novel Preparation and Characterization of Porous Alginate Films

X. Wang, X. Li, E. Stride, J. Huang, M. Edirisinghe, C. Schroeder, S. Best, R. Cameron, D. Waller and A. Donald, *Carbohydrate Polym.*, 79(2010)989-997.

### One Step Electrohydrodynamic Production of Drug-loaded Micro- and Nano-particles

M. Enayati, Z.Ahmad, E.Stride and M.Edirisinghe, *J. Royal Soc. Interface*, 7(2010)667-675.

### A Novel Jet-based Nano-bioceramic Patterning Technique for Osteoblast Guidance

X.Li, G.Koller, J.Huang, L.Di Silvio, T.Renton, M.Esat, W.Bonfield and M.Edirisinghe, *J. Royal Soc. Interface*, 7(2010)189-197.

### The Role of Surface Wettability and Surface Charge of Electrosprayed Nanoapatites on the Behaviour of Osteoblasts

E. Thian, Z. Ahmad, J. Huang, M.Edirisinghe, S. Jayasinghe, D. Ireland, R. Brooks, N. Rushton, W..Bonfield and S. Best, *Acta Biomaterialia*, 6(2010)750-755.

## 2009

### Engineering a Material for Biomedical Applications with Electric Field Assisted Processing

Z.Ahmad, M. Nangrejo, M. Edirisinghe, E.Stride, P.Colombo, H. B. Zhang *Appl. Phys. A.*, 97 (2009) 31-37.

### A Novel Process for Drug Encapsulation using a Liquid to Vapour Phase Change Material

M-w. Chang, E.Stride, M. Edirisinghe, *Soft Matter*, 5(2009)5029-5036.

### Effect of Heat Treatment of Nano-hydroxyapatite Coatings Prepared using Electrohydrodynamic Deposition

X.Li, J.Huang, M.Edirisinghe, G.Koller, L.Di Silvio, T.Renton, M.Esat and W.Bonfield, *Int. J. Nano and Biomaterials*, 2(2009) 477-493.

### A Novel Nanocomposite Polymer for Development of Synthetic Heart Valve Leaflets

A. Kidane, G. Burriesci and M. Edirisinghe, *Acta Biomaterialia*, 5(2009) 2409-2417.

### Novel Preparation Techniques for Controlling Microbubble Uniformity – A Comparison

E.Stride and M.Edirisinghe, *Med. Biol. Eng. & Comp.*,4 (2009)883–892.

[IN SPECIAL ISSUE ON MICROBUBBLES: FROM CONTRAST ENHANCEMENT TO CANCER THERAPY,

GUEST EDITORS Stride, E. and Edirisinghe, M.]

### *In vitro* Method to Characterise Diffusion from Dye from Polymeric Particles: A Model for Drug Release

K.Pancholi, E.Stride and M. Edirisinghe, *Langmuir* 25(2009) 10007-10013

### Electric-jet Assisted Layer-by-Layer Deposition of Gold Nanoparticles to Prepare Conducting Tracks

S. Samarasinghe, Pastoriza-Santos, M. Edirisinghe, M. Reece, L. Liz-Marzán, M. Nangrejo and Z. Ahmad, *J. Natural Sci.*, 1(2009)142-150.

### Preparation of Polymeric Carriers for Drug Delivery with Different Shape and Size using an Electric Jet

M. Enayati, Z.Ahmad, E.Stride and M.Edirisinghe, *Current Pharm. Biotech.*,10 (2009) 600-608.

Novel Preparation of Transdermal Drug-delivery Patch and Functional Wound Healing Materials

Z.Ahmad, E.Stride and M.Edirisinghe, *J. Drug Targeting*, 17(2009) 724-729.

Electrohydrodynamic Forming of Porous Ceramic Capsules from a Pre-ceramic Polymer  
M.Nangrejo, E.Bernardo, P.Colombo, U.Farook, Z.Ahmad, E.Stride and M.Edirisinghe,  
*Mater. Lett.*, 63(2009)483-485.

Novel Electrohydrodynamic Preparation of Porous Chitosan Particles for Drug Delivery  
K.Pancholi, N.Ahras, E.Stride and M.Edirisinghe, *J. Mater.Sci:Mater.in Med.*, 20(2009)917-923.

Preparation of Suspensions of Phospholipid-coated Microbubbles by Coaxial Electrohydrodynamic Atomization

U.Farook, E.Stride and M.J.Edirisinghe, *J.Royal Soc. Interface*, 6(2009)271-277.

**[Work featured on the cover of the journal]**

Controlling the Size and Size Distribution of Electrohydrodynamically Prepared Microbubbles

U.Farook, E.Stride and M.J.Edirisinghe, *J.Bubble Sci. Eng. & Tech.*, 1 (2009)53-57.

Stability of Microbubbles Prepared by Co-axial Electrohydrodynamic Atomisation

U.Farook, E.Stride and M.J.Edirisinghe, *J. Eur Biophys*, 38(2009)713–718.

Electrohydrodynamic Jetting Behaviour of Polyhedral Oligomeric Silesquioxane Nanocomposite

R.Bakhshi, M.J. Edirisinghe, A. Darbyshire, Z.Ahmad and A.Seifalian, *J.Biomater. Appl.*, 23(2009)293-309.

Current Developments and Future Prospects for Heart Valve Replacement Therapy

A.G.Kidane, G.Burriesci, P.Cornejo, A.Dooley, S.Sarkar, P.Bonhoeffer M.Edirisinghe and A.M.Seifalian, *J. Biomed. Mater. Res. B*, 88(2009)290-303.

A New Biodegradable Nanocomposite Based on Polyhedral Oligomeric Silsesquioxane Nano-cages: Cytocompatibility and Investigation into Electrohydrodynamic Jet Fabrication Techniques for Tissue Engineered Scaffolds

J. Raghunath, H. Zhang, M.J. Edirisinghe, A. Darbyshire, P.E.Butler and A.M.Seifalian, *Biotech. & Appl. Biochem.*, 52(2009)1-8.

## **2008**

Development of Cardiovascular Bypass Grafts; Endothelialisation and Applications of Nanotechnology: A Review

A. de Mel, C. Bolvin, M. Edirisinghe, G. Hamilton, A.M. Seifalian, *Expert Review of Cardiovascular Therapy*, 6(2008)1259-77.

*Invited Review: Novel Microbubble Preparation Technologies*

E.Stride and M.Edirisinghe, *Soft Matter*, 4(2008)2350-2359.

Synthesis, Processing and Forming Gold Structures from a 0.1 wt. % Concentration Solution

S.R.Samarasinghe and M.J.Edirisinghe, *Gold Bulletin*, 41(2008)284-295.

Preparation and Characterisation of a Novel Bioactive Restorative Composite Based on Covalently Coupled Polyurethane-Nano-hydroxyapatite Fibres  
A.S.Khan, Z.Ahmad, M.J.Edirisinghe, F.S.L.Wong and I.U.Rehman, *Acta Biomaterialia*, 4(2008)1275-1287.

Novel Preparation of Nitrogen-doped Titanium Dioxide Films  
S.Mahalingam and M.J.Edirisinghe, *J.Phys. D: Applied Phys.*, 41(2008) article no. 215406.

Novel Preparation of Graded Porous Structures for Medical Engineering  
A.Muthutantri, J.Huang and M.Edirisinghe, *J.Royal Soc. Interface*, 29(2008)1459-1467.

Generation of Multilayered Structures for Biomedical Applications using a Novel Tri-needle Coaxial Device and Electrohydrodynamic Flow  
Z.Ahmad, H.B.Zhang, U.Farook, M.Edirisinghe, E.Stride and P.Colombo, *J.Royal Soc. Interface*, 27(2008)1255-1261.

**[Work featured on the cover of the journal]**

Novel Forming of Columnar Lead Zirconate Titanate Structures  
D.Sun, S.A. Rocks, D.Wang, M.J.Edirisinghe and R.A.Dorey, *J. Euro. Ceram. Soc.*, 28(2008)3131-3139.

Formation of PZT Crack-free Thick Films by Electrohydrodynamic Atomization Deposition  
D.Wang, M.J.Edirisinghe and R.A.Dorey, *J. Euro. Ceram. Soc.*, 28(2008)2739-2745.

Generation of Microbubbles for Diagnostic and Therapeutic Applications using a Novel Device  
K.Pancholi, E.Stride and M.Edirisinghe, *J. Drug Targeting*, 6(2008)494-501.

Increasing the Non-linear Character of Microbubble Oscillations at Low Acoustic Pressures  
E. Stride, K.Pancholi, M.Edirisinghe and S.Samarsinghe, *J.Royal Soc. Interface*, 5(2008)807-811.

Deposition of Nano-hydroxyapatite Particles Utilising Direct and Transitional Electrohydrodynamic Processes  
Z. Ahmad, E. S. Thian, J. Huang, M. J. Edirisinghe, S. M. Best, S. N. Jayasinghe, W. Bonfield, R. A. Brooks and N. Rushton, *J.Mater.Sci. : Mater. in Med.*, 19(2008)3093-3104.

Dipping and Electro spraying for the Preparation of Hydroxyapatite Foams for Bone Tissue Engineering  
A.Muthutantri, J.Huang and M.Edirisinghe, *Biomed. Mater.*, 3(2008) article no. 025009.

Novel Co-axial Electrohydrodynamic In-situ Preparation of Liquid-filled Polymer-shell Microspheres for Biomedical Applications  
U.Farook, M.Edirisinghe, E.Stride and P.Colombo, *J.Microencap.*, 25(2008)241-247.

Preparation of Polymeric and Ceramic Porous Capsules by a Novel Electrohydrodynamic Process  
M.Nangrejo, Z.Ahmad, P.Colombo, E.Stride and M.Edirisinghe, *J. Pharmaceutical Development and Technology*, 13(2008)425-432.

Freeform Fabrication of Nano-biomaterials using 3D Electrohydrodynamic Print-patterning  
Z. Ahmad, E.S. Thian, J. Huang, M.J. Edirisinghe, S.N. Jayasinghe, D.C. Ireland, R.A. Brooks, N. Rushton, W.Bonfield and S.M. Best, *J.Biomed. Nanotech.*, 4(2008)185-195.

Fabrication of Nano-structured Gold Films by Electrohydrodynamic Atomisation  
S.R.Samarasinghe, I Pastoriza-Santos, M.J.Edirisinghe and L.Liz Marzan, *Appl. Phys. A*, 91(2008)141-147.

Development of Nano-hydroxyapatite Coating by Electrohydrodynamic Atomization Spraying  
X.Li, J.Huang and M.Edirisinghe, *J.Mater.Sci. : Mater. in Med.*, 19(2008)1545-1551.

Dynamics of Bubble Formation in Highly Viscous Liquids  
K.Pancholi, E.Stride and M.Edirisinghe, *Langmuir*, 24(2008)4388-4393.

Novel Method of Preparing Hydroxyapatite Foams  
A.Muthutantri, J.Huang and M.Edirisinghe, *J.Mater.Sci.:Mater. in Medicine*, 19(2008)1485-1490.

The Role of Electrosprayed Nanoapatites in Guiding Osteoblast Behaviour  
E.S. Thian, Z. Ahmad, J. Huang, M.J. Edirisinghe, S.N. Jayasinghe, D.C. Ireland, R.A. Brooks, N. Rushton, W.Bonfield and S.M. Best, *Biomaterials*, 29(2008)1833-1843.

Novel Methods for Preparing Phospholipid Coated Microbubbles  
K.Pancholi, U. Farook, R. Moaleji, E. Stride and M. J. Edirisinghe, *Euro. J. Biophys.*, 37(2008)515-520.

Influence of Nanohydroxyapatite Patterns Deposited by Electrohydrodynamic Spraying on Osteoblast Response  
E.S. Thian, J. Huang, Z. Ahmad, M.J. Edirisinghe, S.N. Jayasinghe, D.C. Ireland, R.A. Brooks, N. Rushton, S.M. Best and W. Bonfield, *J. Biomed. Mater. Res. A*, 85(2008)188-194.

Encapsulation of Silver Particles using Co-axial Jetting  
S. R. Samarasinghe, K. Balasubramanian and M. J. Edirisinghe, *J. Mater. Sci.: Mater. in Electronics*, 19(2008)33-38.

Novel Patterning of Nano-bioceramics:Template-assisted Electrohydrodynamic Atomization Spraying  
X. Li, J. Huang and M.J. Edirisinghe, *J. Royal Soc. Interface*, 5(2008)253-257.

Electrosprayed Nanoapatite: A New Generation of Bioactive Material  
E.S. Thian, Z. Ahmad, J. Huang, M.J. Edirisinghe, S.N. Jayasinghe, D.C. Ireland, R.A. Brooks, N. Rushton, W.Bonfield and S.M. Best, *Key Engineering Materials*, 361-363(2008)597-600.

The Effect of Reaction Conditions on Hydroxyapatite Particle Morphology and Applications to the Reticulated Foam Method of Scaffold Production  
J.H. Robinson, S.M.Best, Z. Ahmad and M.J.Edirisinghe, *Key Engineering Materials*, 361-363(2008)3-6.



## 2007

Flow Behaviour of a POSS Biopolymer Solution

A.G.Kidane, M.J.Edirisinghe, P.Bonhoeffer and A.M.Seifalian, *Biorheology*, 44(2007)265-272.

Electrohydrodynamic Coating of Metal with Nano-sized Hydroxyapatite

X.Li, J.Huang, Z.Ahmad and M.Edirisinghe, *J.Biomed. Mater. Eng.*, 17(2007)335-346.

Characteristics of Electrohydrodynamically Prepared Titanium Dioxide Films

S.Mahalingam and M.J.Edirisinghe, *Appl. Phys. A*, 89(2007)987-993.

Bioactivity of Nanoapatite Produced by Electrohydrodynamic Atomisation

E.S. Thian, Z. Ahmad, J. Huang, M.J. Edirisinghe, S.N. Jayasinghe, D.C. Ireland, R.A. Brooks, N. Rushton, W.Bonfield and S.M. Best, *J. Bionanoscience*, 1(2007)60-63.

Direct Writing of Lead Zirconate Titanate Piezoelectric Structures by Electrohydrodynamic Atomisation

S.A. Rocks, D. Wang, D. Sun, S.N. Jayasinghe, M.J. Edirisinghe and R.A. Dorey, *J.Electroceram.*, 19(2007)287-293.

Microbubbling by Co-axial Electrohydrodynamic Atomization

U. Farook, E. Stride, M. J. Edirisinghe and R. Moaleji, *Med. Biol. Eng. & Comp.*, 45(2007) 781-789.

Novel Electrohydrodynamic Printing of Nanocomposite Biopolymer Scaffolds

A.Gupta, A.M.Seifalian, Z.Ahmad, M.J.Edirisinghe and M.C.Winslett, *J.Bioactive and Compat. Polym*, 22(2007)265-280.

Preparation of Microbubble Suspensions by Co-axial Electrohydrodynamic Atomization

U.Farook, H.B.Zhang, M.J.Edirisinghe, E.Stride and N.Saffari, *Med. Eng. & Phys.*, 29(2007)749-754.

Coaxial Electrohydrodynamic Direct Writing of Nano-suspensions

D.Z. Wang, S.N. Jayasinghe, M.J. Edirisinghe and Z.B.Luklinska, *J. Nanoparticle Research*, 9(2007)825-831.

Electrohydrodynamic Processing Routes for Bioceramics

H.B.Zhang, M.J.Edirisinghe and J.Huang, *Key Engineering Materials*, 330-332(2007)139-142.

A Novel 3D Patterning Technique for Forming Advanced Ceramics

D.Z. Wang, M.J. Edirisinghe and S.N. Jayasinghe, *Key Engineering Materials*, 336-338(2007)977-979.

## 2006

Electrohydrodynamic Print-patterning of Nano-hydroxyapatite

Z. Ahmad, J. Huang, M.J. Edirisinghe, S.N. Jayasinghe, S. M. Best, W. Bonfield, R. A. Brooks and N. Rushton, *J.Biomed. Nanotech.*, 2(2006)201-207.

Polyhedral Oligomeric Silsequioxane–Polyurethane Nanocomposite Microvessels for an Artificial Capillary Bed

R.Y. Kannan, H.J. Salacinski, M.J. Edirisinghe, G. Hamilton and A.M. Seifalian, *Biomaterials*, 27(2006)4618-4626.

Printing Gold Nanoparticles with an Electrohydrodynamic Direct Write Device

S.R.Samarasinghe, I Pastoriza-Santos, M.J. Edirisinghe, L.Liz Marzan and M.J.Reece, *Gold Bulletin*, 39(2006)48-53.

A Novel Method for the Preparation of Biodegradable Microspheres for Protein Drug Delivery

R.Pareta and M.J. Edirisinghe, *J. Royal Soc. Interface*, 3(2006)573-582.

Electrospinning Zirconia Fibre from a Suspension

H.B.Zhang and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 89(2006)1870-1875.

Solid Freeform Fabrication of Thin-walled Ceramic Structures using an Electrohydrodynamic Jet

D.Z. Wang, S.N. Jayasinghe and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 89(2006)1727-1729.

Flow Behaviour of Dielectric Liquids in an Electric Field

H.B.Zhang, M.J. Edirisinghe and S.N.Jayasinghe, *J. Fluid Mech.*, 558(2006)103-111.

Electrically-forced Microthreading of Highly Viscous Dielectric Liquids

H.B.Zhang, S.N.Jayasinghe and M.J. Edirisinghe, *J. Electrostatics*, 64(2006)355-360.

Improved Mechanical Reliability of Bone Tissue Engineering (Zirconia) Scaffolds by Electrospaying

Q.Z. Chen, H.B.Zhang, D.Z. Wang, M.J. Edirisinghe and A.R. Boccaccini, *J. Amer. Ceram. Soc.*, 89(2006)1534-1539.

Electrostatic Atomisation Spraying: A Novel Deposition Method for Nano-sized Hydroxyapatite

J. Huang, S. N. Jayasinghe, X. Su, Z. Ahmad, S. M. Best, M.J. Edirisinghe, R.A. Brooks, N. Rushton and W. Bonfield, *Key Engineering Materials*, 309-311(2006)635-638.

Asprin Particle Formation by Electric Field-assisted Release of Droplets

S.Li, S.N.Jayasinghe and M.J. Edirisinghe, *Chem. Eng. Sci.*, 61(2006)3091-3097.

A Novel Method for the Preparation of Starch Films and Coatings

R.Pareta and M.J. Edirisinghe, *Carbohydrate Polym.*, 63(2006)425-431.

Coaxial Electrohydrodynamic Atomization of Ceramic Suspensions

K.Balasubramanian, S.N.Jayasinghe and M.J. Edirisinghe, *Int. J. Appl. Ceram. Tech.*, 3(2006)55-60.

## 2005

Novel Deposition of Nano-sized Silicon Substituted Hydroxyapatite by Electrostatic Spraying

J. Huang, S.N. Jayasinghe, S.M. Best, M.J. Edirisinghe, R.A. Brooks, N. Rushton, and W. Bonfield, *J. Mater. Sci.: Mater. in Medicine*, 16(2005)1137-1142.

Electrohydrodynamic Deposition of Nanostructured Lead Zirconate Titanate

D.Sun, S.A.Rocks, M.J. Edirisinghe, R.A.Dorey and Y.Wang, *J. Nanoscience & Nanotechnology*, 5(2005)1846-1855.

Electrohydrodynamic Atomization of Protein (Bovine Serum Albumin)

R. Pareta, A. Brindley, M.J. Edirisinghe, S.N. Jayasinghe and Z. Luklinska, *J.Mater.Sci.:Mater. in Med.*, 16(2005)919-925.

Instrument for Electrohydrodynamic Print-patterning 3D Complex Structures

D.Z. Wang, S.N. Jayasinghe and M.J. Edirisinghe, *Rev. Sci. Instr.*, 76(2005) 075105.

High Resolution Print Patterning of a Nano-suspension

D.Z. Wang, S.N. Jayasinghe and M.J. Edirisinghe, *J. Nanoparticle Research*, 7(2005)301-306.

Jet-Break-up in Nano-suspensions during Electrohydrodynamic Atomization in the Stable Cone-jet Mode

S.N. Jayasinghe and M.J. Edirisinghe, *J. Nanoscience & Nanotechnology*, 5(2005)923-926.

Novel Hydroxyapatite Coating on Alumina by Electro spraying

J. Huang, S.M. Best, S.N. Jayasinghe, M.J. Edirisinghe and W. Bonfield, *Key Engineering Materials*, 284-286(2005)191-194.

Novel Forming of Single and Multiple Ceramic Micro-channels

S.N. Jayasinghe and M.J. Edirisinghe, *Appl. Phys. A.*, 80(2005)701-702.

Electrostatic Atomization of a Ceramic Suspension at Pico-Flow Rates

S.N. Jayasinghe and M.J. Edirisinghe, *Appl. Phys. A.*, 80(2005)399-404.

Preparation of Lead Zirconate Titanate Nano-powder by Electrohydrodynamic Atomization

S.N. Jayasinghe, R. Dorey, M.J. Edirisinghe and Z. Luklinska, *Appl. Phys. A.*, 80(2005)723-725.

## 2004

*In-Vitro* Assessment of the Biological Response to Nano-sized Hydroxyapatite

J. Huang, S.M. Best, W. Bonfield, R.A. Brooks, N. Rushton, S.N. Jayasinghe and M.J. Edirisinghe, *J. Mater. Sci. :Mater. in Med.*, 15(2004)441-445.

Electro spraying of a Nano-hydroxyapatite Suspension

J. Huang, S.N. Jayasinghe, S. M. Best, M.J. Edirisinghe, R. A. Brooks and W. Bonfield, *J.Mater.Sci.*, 39(2004)1029-1032.

Electrohydrodynamic Atomization of a Concentrated Nano-Suspension

M.J. Edirisinghe and S.N. Jayasinghe, *Int. J. of Appl. Ceram. Tech.*, 1(2004)140-145.

Controlled Deposition of Nano-particle Clusters by Electrohydrodynamic Atomization  
S.N. Jayasinghe, M.J. Edirisinghe and D.Z. Wang, *Nanotechnology*, 15(2004)1519-1523.

Electrically Forced Jets and Microthreads of High Viscosity Dielectric Liquids  
S.N. Jayasinghe and M.J. Edirisinghe, *J. Aerosol Sci.*, 35(2004)233-243.

Electric-field Driven Jetting from Dielectric Liquids  
S.N. Jayasinghe and M.J. Edirisinghe, *Appl. Phys. Lett.*, 85(2004)4243-4245.

Electrostatic Atomization of a Ceramic Suspension  
S.N. Jayasinghe and M.J. Edirisinghe, *J. Euro. Ceram. Soc.*, 24(2004)2203-2213.

Relic and Droplet Sizes produced by Electrostatic Atomization of Ceramic Suspensions  
S.N. Jayasinghe, M.J. Edirisinghe and P.G. Kippax, *Appl. Phys. A.*, 78(2004)343-347.

Structural Evaluation of Polysilane derived Products: From Amorphous to Thermodynamically Stable Phases  
X. Li and M.J. Edirisinghe, *Phil. Mag. A.*, 84(2004)647-671.

Evolution of the Ceramic Structure During Thermal Degradation of a Si-Al-C-O Precursor  
X. Li and M.J. Edirisinghe, *Chemistry of Materials*, 16(2004)1111-1119.

## **2003**

A Novel Method of Freeforming Multiple Tracks from Concentrated Suspensions  
S.N. Jayasinghe and M.J. Edirisinghe, *J.Mater. Res. Innovat.*, 7(2003)62-64.

Formulation of a Ceramic Ink for a Wide Array Drop-on-demand Ink-jet Printer  
X. Zhao, J.R.G. Evans, M.J. Edirisinghe and J.H. Song, *Ceram. International*, 29(2003)887-892.

Electrostatic Atomization of Chitosan  
S.N. Jayasinghe and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 22(2003)1443-1445.

Solid Freeform Fabrication of Ceramics  
B.Y. Tay, J.R.G. Evans and M.J. Edirisinghe, *International Materials Reviews*, 48(2003)341-370.

Preparation of Collagen Films by Electrostatic Atomization  
S.N. Jayasinghe and M.J. Edirisinghe, *Mater. Sci. Lett.*, 22(2003)1617-1619.

A New Al Co-ordination Site in Si-C-Al-N-(O) Ceramics  
X. Li and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 86(2003)2212-2214.

Structural Investigations of Si-Al-C-O Precursor and their Pyrolysis Products in Nitrogen  
X. Li and M.J. Edirisinghe, *Proc. Roy. Soc. A.*, 459(2003)2731-2747.

## **2002**

Ink-jet Printing of Gold Conducting Tracks  
H.M.Nur, J.H. Song, J.R.G. Evans and M.J. Edirisinghe, *J.Mater. Sci: Mater. in Electronics*, 13(2002)213-219.

Ink-jet Printing of Ceramic Pillar Arrays

X. Zhao, J.R.G. Evans, M.J. Edirisinghe and J.H. Song, *J. Mat. Sci.*, 37(2002)1987-1992.

Direct Ink-jet Printing of Vertical Walls

X. Zhao, J.R.G. Evans, M.J. Edirisinghe and J.H. Song, *J.Amer. Ceram. Soc.*, 85(2002) 2113-2115.

A Novel Method of Forming Open Cell Ceramic Foam

S.N.Jayasinghe and M.J. Edirisinghe, *J. Porous Materials*, 9(2002)265-273.

Effect of Viscosity on the Size of Relics Produced by Electrostatic Atomization

S.N. Jayasinghe and M.J. Edirisinghe, *J.Aerosol.Sci.*, 33(2002)1379-1388.

Time Dependent Geometrical Changes in a Ceramic Ink Droplet

B.Y. Tay and M.J. Edirisinghe, *Proc. Roy. Soc. A.*, 458(2002)2039-2051.

A Novel Ceramic Printing Technique based on Electrostatic Atomization of a Suspension

S.N. Jayasinghe, M.J. Edirisinghe and T. de Wilde, *J.Mater. Res. Innovat.*, 6(2002)92-95.

Porosity and Strength of Silicon Carbide Foams Prepared using Preceramic Polymers

M.R. Nangrego and M.J. Edirisinghe, *J.Porous Mater.*, 9(2002)131-140.

Production of Tungsten Oxide Coatings via Sol-gel Processing of Tungsten Anion Solutions

A.P. Baker, S.N.B. Hodgson and M.J. Edirisinghe, *Surface and Coatings Tech.*, 153(2002)184-193.

Obtaining Fine Droplet Relics by Electrostatic Atomization of Viscous Liquids

S.N. Jayasinghe and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 37(2002)1987-1992.

On Substrate Selection for Direct Ink-Jet Printing

B.Y. Tay and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 21(2002)279-281.

Deposition of Fine Silicon Carbide Relics by Electrostatic Atomisation of a Polymeric Precursor

D.A. Grigoriev, M.J. Edirisinghe and X. Bao, *J. Mater. Res.*, 17(2002)487-491.

Evaporation of Liquid during Cone-Jet Mode Electro spraying

D.A. Grigoriev and M.J. Edirisinghe, *J. Appl. Phys.*, 91(2002)437-439.

Dispersion and Stability of Silver Inks

B.Y.Tay and M.J. Edirisinghe, *J.Mater.Sci.*, 37(2002)4653-4661.

## **2001**

Preparation of Silicon Carbide by Electro spraying of a Polymer Precursor

D.A.Grigoriev, M.J. Edirisinghe, X.Bao, J.R.G. Evans and Z.B.Luklinska, *Phil. Mag Lett.*, 81(2001)285-291.

Combinatorial Searches of Inorganic Materials Using the Ink-Jet Printer: Science, Philosophy and Technology  
J.R.G. Evans, M.J. Edirisinghe, P.V.Coveney and J.Eames, *J. Euro. Ceram. Soc.*, 21(2001)2291-2299.

PZT Pillars for 1-3 Composites Prepared by Ink-jet Printing  
A.R.Bhatti, M.Mott, J.R.G. Evans and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 20(2001)1245-1248.

Ceramic Freeforming using an Advanced Multi-nozzle Ink-jet Printer  
X. Zhao, J.R.G. Evans, M.J. Edirisinghe and J.H. Song, *J.Mater. Synth. Process.*, 9(2001)319-327.

Controlled Synthesis of Silicon Carbide-Aluminum Nitride Composites using a Pre-ceramic Polymer Route  
X. Li and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 21(2001)21-23.

Ceramic Injection Moulding  
M.J. Edirisinghe, *Encyclopedia of Materials: Science and Technology*, K.H.J. Buschow, R.W. Cahn, M.C. Flemings et al. (editors), Elsevier, 5(2001)4088-4094.

Preparation of Ceramic Foams from Polymeric Precursors  
X. Bao, M.R. Nangrejo and M.J. Edirisinghe, *Brit. Ceram. Proc.*, 62(2001)1-16.

Preparation of Zirconia Inks for Continuous Jet Printing  
M.R. Nangrejo, X. Bao and M.J. Edirisinghe, *J. Mater. Res.*, 16(2001)373-384.

Investigation of Some Phenomena Occurring During Ink-jet Printing of Ceramics  
B.Y. Tay and M.J. Edirisinghe, *J. Mater. Res.*, 16(2001)373-384.

Processing of Ceramic foams from Polymeric Precursor-Alumina Suspensions  
M.R. Nangrejo, X. Bao and M.J. Edirisinghe, *Cellular Polymers*, 20(2001)17-35.

Silicon Carbide-Titanium Carbide Composite Foams Produced using a Polymeric Precursor  
M.R. Nangrejo, X. Bao and M.J. Edirisinghe, *Int. J. Inorg. Mater.*, 3(2001)37-45.

## **2000**

Polycyclodisilazine: A New Polymeric Precursor for Silicon Nitride-based Ceramics  
X. Bao and M.J. Edirisinghe, *J. Mater. Chem.*, 10(2000)395-401.

Preparation of Silicon Carbide Foams using Polymeric Precursor Solutions  
X. Bao, M.R. Nangrejo and M.J. Edirisinghe, *J. of Mater. Sci.*, 35(2000)4365-4372.

Preparation of Silicon Carbide-Silicon Nitride Composite Foams from Pre-ceramic Polymers  
M.R. Nangrejo, X. Bao and M.J. Edirisinghe, *J. Euro. Ceram. Soc.*, 20(2000)1777-1785.

Optimization of Heating Schedules in Pyrolytic Binder Removal from Ceramic Mouldings  
J.H. Song, J.R.G. Evans, M.J. Edirisinghe and E.H. Twizell, *J. Mater. Res.*, 15(2000)449-457.

On the Preparation of Ceramic Ink for Continuous Jet Printing  
B.Y.Tay, H.Rashid and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 19 (2000) 1151-1154.

The Structure of Ceramic Foams Produced using Polymeric Precursors  
M.J. Nangrejo, X. Bao and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 19(2000)787-789.

Coating with Amorphous Silicon Carbide using Polymeric Precursors  
P.P. Loh, X. Bao, M.R. Nangrejo and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 19 (2000) 587-589.

Dispersion of Ceramic Ink using an Ultrasonic Disruptor  
H.Rashid, B.Y.Tay and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 19 (2000) 799-801.

Novel Polymeric Precursor Routes for the Preparation of SiC-Si<sub>3</sub>N<sub>4</sub> Composites  
X. Bao and M.J. Edirisinghe, *Mater. Tech.*, 15(2000)137-142.  
[Feature by this Journal, on its own accord, without consulting authors]

### 1999

Simultaneous Formation of SiC and Si<sub>3</sub>N<sub>4</sub> by Pyrolysis of a Polymeric Precursor  
X.Bao, P.P. Carpenter, M.J. Edirisinghe and D.D. Hall, *Phil. Mag. Letters*, 79(1999)453-457.

Different Strategies for the Synthesis of Silicon Carbide-Silicon Nitride Composites from Pre-ceramic Polymers  
X. Bao and M.J. Edirisinghe, *Composites A*, 30(1999)601-610.

Synthesis of SiC- Si<sub>3</sub>N<sub>4</sub> Composites from a Polymeric Precursor  
X. Bao, M.J. Edirisinghe, G.F. Fernando and M.J. Folkes, *Ceramic Transactions*, 94(1999)241-249.

Synthesis of Silicon Carbide Foams from Polymeric Precursors and their Blends  
X Bao, M.R. Nangrejo and M.J. Edirisinghe, *J. Mater. Sci.*, 34(1999)2495-2505.

Effects of Pre-pyrolysis Heat Treatment on the Preparation of Silicon Carbide from a Polycarbosilane Precursor  
S. Matthews, M.J. Edirisinghe and M.J. Folkes, *Ceram. International*, 25(1999)49-60.

Formulation and Multilayer Jet Printing of Ceramic Inks  
J.H. Song, M.J. Edirisinghe and J.R.G. Evans, *J. Amer. Ceram. Soc.*, 82(1999)3374-80.

### 1998

Ceramic Inks for Direct Continuous Jet Printing  
W.D. Teng and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 81(1998)1033-1036.

Addition of Copper Particles to an Alumina Matrix  
D.E. Aldrich and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 17(1998)965-967.

Use of Trichlorophenylsilane in the Synthesis of Polymeric Precursors for Silicon Carbide  
X. Bao and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 17(1998)1641-1643.

Synthesis of Silicon Carbide from Polysilanes: The Effect of Hydrosilane and Vinyl Groups  
X. Bao, M.J. Edirisinghe, G.F. Fernando and M.J. Folkes, *Brit. Ceram. Trans.*,  
97(1998)253-258.

Precursors for Silicon Carbide Synthesised from Dichloromethylsilane Derivatives  
X. Bao, M.J. Edirisinghe, G.F. Fernando and M.J. Folkes, *J. Euro. Ceramic Society.*,  
18(1998)915-922.

TEM Characterization of a Plasma-Sprayed ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> Thermal Barrier Coating  
P.A. Diaz, V. Ralph and M.J. Edirisinghe, *Mater. Charac.*, 41(1998)55-67.

Solid Freeform Fabrication Methods for Engineering Ceramics  
M.J. Edirisinghe, *Proc. Brit. Ceram. Soc.*, 58(1998)125-132.  
[also published in *Brit. Ceram. Trans.* 97(1998)283-286]

Multi-parameter Mapping of Polymer Properties for Fast Thermolysis of Powder Mouldings  
J.H. Song, J.R.G. Evans, M.J. Edirisinghe and E.H. Twizell, *J. Appl. Polym. Sci.*,  
70(1998)545-557.

Development of Continuous Direct Ink-Jet Printing of Ceramics  
W.D. Teng and M.J. Edirisinghe, *Brit. Ceram. Trans.*, 97(1998)169-173.

Film Blowing of Ceria Electrolyte Plates  
H.M. Williams, J.R.G. Evans, J.E. Shemilt and M.J. Edirisinghe, *Mater. & Manufacturing  
Process*, 13(1998)147-158.

## **1997**

Thermolysis of Plastically Formed Ceramics: Modelling and Computer Simulation  
M.J. Edirisinghe, *Mater. & Manuf. Processes*, 12(1997)609-628.

Freeforming Ceramics  
M.J. Edirisinghe, *Materials World*, 5(1997)138-140.

Optimization of Dispersion and Viscosity of a Ceramic Jet Printing Ink  
W.D. Teng, M.J. Edirisinghe and J.R.G. Evans, *J. Amer. Ceram. Soc.*, 80(1997)929-934.  
Towards Particle-by-Particle Deposition of Ceramics Using Electrostatic Atomization  
W.D. Teng, Z.A. Huneiti, W. Machowski, J.R.G. Evans, M.J. Edirisinghe and W.  
Balachandran, *J. Mater. Sci. Lett.*, 16(1997)1017-1019.

Solid Freeforming of Ceramics Using a Drop on Demand Jet Printer  
Q.F. Xiang, J.R.G. Evans, M.J. Edirisinghe and P.F. Blazdell, *J. Eng. Manuf. Proc.  
I.Mech.E. (UK) Part B*, 211(1997)211-214.

Fracture Toughness of Doped Ceria Ceramics  
J.E. Shemilt, H.M. Williams, M.J. Edirisinghe, J.R.G. Evans and B. Ralph, *Scripta Mater.*,  
36(1997)929-934.

Development of Ceramic Inks for Jet Printing: Effect of Conductivity  
W.D. Teng and M.J. Edirisinghe, *Key Engineering Materials*, 132-136(1997)337-340.



## 1996

Diffusion of Degradation Products in Ceramic Moldings during Pyrolysis: Effect of Geometry

S.A. Matar, M.J. Edirisinghe, J.R.G. Evans and E.H. Twizell, *J. Amer. Ceram. Soc.*, 79(1996)749-55.

Modeling the Effect of Gas Transport on the Formation of Defects during Thermolysis of Powder Moldings

J.H. Song, M.J. Edirisinghe, J.R.G. Evans and E.H. Twizell, *J. Mater. Res.*, 11(1996)830-840.

Effect of Powder Bed on Critical Heating Rates for Thermolysis of Ceramic Injection Moldings

J.H. Song, M.J. Edirisinghe, J.R.G. Evans and E.H. Twizell, *AIChE Journal*, 42(1996)1715-1722.

Mathematical Modelling of Binder Removal from Plastically Formed Engineering Ceramics  
J.H.Song, M.J. Edirisinghe, J.R.G.Evans and E.H.Twizell, *Advances in Computational Mathematics*, 6(1996)325-331.

On the Dispersion of Fine Ceramic Powders in Polymers

L.Gabrielson and M.J. Edirisinghe, *J.Mater.Sci.Lett.*, 15(1996)1105-1107.

Microstructural Changes and Phase Transformations in a Plasma Sprayed Zirconia-Yttria-Titania Thermal Barrier Coating

P.Diaz, M.J. Edirisinghe and B.Ralph, *Surface and Coatings Tech.*, 82(1996)284-290.

On the Use of Nickel and Iron Additions as Sintering Aids for Titanium Diboride

K.B.Shim, M.J. Edirisinghe and B.Ralph, *Brit. Ceram. Trans. & J.*, 95(1996)15-22.

Determination of Gas Transport Coefficients in Ceramic Bodies during the Thermolysis of Organic Additives

J.H.Song, J.R.G.Evans, M.J. Edirisinghe and E.H.Twizell, *International Materials Reviews*, 41(1996)116-128.

## 1995

Microstructural Characterization of a Zirconia-Titania-Yttria Thermal Barrier Coating

P.Diaz, M.J. Edirisinghe and B.Ralph, *MRS (USA) Proceedings*, 403(1995)253-258.

Rheology of Zirconia Suspensions in Non-polar Organic Media

V.M.B.Moloney, D.Parris and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 78(1995)3225-3232.

The Computer Aided Manufacture of Ceramics using Multilayer Jet Printing

P.F.Blazdell, J.R.G.Evans, M.J. Edirisinghe, P.Shaw and M.J.Binstead, *J. Mater. Sci. Lett.*, 14(1995)1562-1565.

Processing and Properties of Some Alumina-Boride Composites,

M.J. Edirisinghe, *MRS (USA) Proceedings*, 365(1995)119-124.

A Model for the Diffusion of Additives during Thermolysis of a Ceramic Body

H.M.Shaw and M.J. Edirisinghe, *Philosophical MagazineA*, 72(1995)267-280.

The Influence of Monomer and Polymer Properties on the Removal of Organic Vehicle from Ceramic and Metal Mouldings

S.A. Matar, J.R.G. Evans, M.J. Edirisinghe and E.H.Twizell, *J. Mater. Res.*, 10(1995)2060-2072.

Modelling the Removal of Organic Vehicle from Ceramic or Metal Mouldings: The Effect of Gas Permeation on the Incidence of Defects

S.A. Matar, M.J. Edirisinghe, J.R.G.Evans, E.H.Twizell and J.H.Song, *J. Mater. Sci.*, 30(1995)3805-3810.

Synthesis of Silicon Oxynitride from a Polymeric Precursor IV. Pyrolysis of the Copolymers

Ga-er Yu, M.J. Edirisinghe, D.S.Finch, B.Ralph and J.Parrick, *J. Mater. Sci.*,

30(1995)5371-5380.

Synthesis of a Silicon Nitride Powder from a Polymeric Precursor

Ga-er Yu, M.J. Edirisinghe, D.S.Finch, B.Ralph and J.Parrick, *J. Euro. Ceram. Soc.*, 15(1995)581-590.

Shrinkage and Particle Packing During Removal of Organic Vehicle from Ceramic Injection Mouldings

H.M.Shaw and M.J. Edirisinghe, *J. Euro. Ceram. Soc.*, 15(1995)109-116.

Grain Boundary Structure in Titanium Diboride

K.B.Shim, J.Kwiencinski, M.J. Edirisinghe and B.Ralph, *Materials Science Forum*, 189-190(1995)129-134.

## 1994

Thermal Decomposition of a Copolymer of Methylcyclosiloxanes and Methylcyclosilazanes to Non-Oxide Ceramics, in Covalent Ceramics II: Non-Oxides

Ga-er Yu, D.S.Finch, M.J. Edirisinghe, J.Parrick, B.Ralph and D.Clark, *MRS(USA) Proceedings*, 327(1994)201-206.

Characterization of a Zirconia-Yttria-Titania Thermal Barrier Coating

JP.Diaz, M.J. Edirisinghe and B.Ralph, *J. Mater. Sci. Lett.*, 13(1994)1595-1598.

Synthesis of Silicon Oxynitride from a Polymeric Precursor III. Polymerization and Copolymerization of Methylcyclosiloxanes and Methylcyclosilazanes

Ga-er Yu, J.Parrick, M.J. Edirisinghe, D.S.Finch and B.Ralph, *J. Mater. Sci.*, 29(1994)5569-5575.

Sintering of Al<sub>2</sub>O<sub>3</sub>-ZrB<sub>2</sub> Composites

K.Sikorski, W.Czerepko, M.J. Edirisinghe and B.Ralph, *Processing of Adv. Mater.*, 4(1994)95-103.

Porosity Development During the Removal of Organic Vehicle from Ceramic Injection Mouldings

H.M.Shaw and M.J. Edirisinghe, *J. Euro. Ceram. Soc.*, 13(1994)135-142.

Synthesis of Silicon Oxynitride from a Polymeric Precursor II. The Formation of Trimethylcyclotrisilazane and Tetramethylcyclotetrasilazane from the Ammonolysis of Dichloromethylsilane in Diethyl Ether

Ga-er Yu, J.Parrick, M.J. Edirisinghe, D.S.Finch and B.Ralph, *J. Mater. Sci.*, 29(1994)1680-1685.

On the Effect of Local Variations in Density in Monolithic Ceramic Bodies  
A.Olszyna, M.J. Edirisinghe, B.Ralph and K.K.Dutta, *Ceram. International*, 20(1994)1-8.

### 1993

Removal of Binder from Ceramic Bodies Made Using Plastic Forming Methods  
H.M.Shaw and M.J. Edirisinghe, *Bull. Amer. Ceram. Soc.*, 72(1993)94-99.

Grain Boundaries and Interfaces

B.Ralph, K.B.Shim and M.J. Edirisinghe, *Archiwum Nanki o Materialach*, 14(1993)9-21.

Synthesis of Silicon Oxynitride from a Polymeric Precursor I. Hydrolysis of Dichloromethylsilane

Ga-er Yu, J.Parrick, M.J. Edirisinghe, D.S.Finch and B.Ralph, *J. Mater. Sci.*, 28(1993)4250-4254.

Microstructural Characterization of Titanium Diboride

B.Shim, J.Kwiencinski, M.J. Edirisinghe and B.Ralph, *Mater. Charac.*, 31(1993)39-46.

Fabrication of Engineering Ceramics by Injection Moulding a Suspension with Optimum Powder Properties II . Mechanical Properties and Wear Behaviour

E.F.Q.Nogueira, D.T.Gawne and M.J. Edirisinghe, *J. Mater. Sci.*, 28(1993)4821-4828.

Fabrication of Engineering Ceramics by Injection Moulding a Suspension with Optimum Powder Properties I. Processing and Microstructure

R.E.F.Q.Nogueira, M.J. Edirisinghe and D.T.Gawne, *J. Mater. Sci.*, 28(1993)4167-4174.

The Effect of Porosity Development on the Removal of Organic Vehicle from Ceramic and Metal Mouldings

S.A.Matar, M.J. Edirisinghe, J.R.G.Evans and E.H.Twizell, *J. Mater. Res.*, 8(1993)617-625.

Shaping of Titanium Diboride by Injection Moulding Precursor Materials

M.J. Edirisinghe and J.McCollum, *Ceram. International*, 19(1993)113-120.

Binder Redistribution During Pyrolysis of Ceramic Injection Mouldings

H.M.Shaw, M.J. Edirisinghe and S.Holding, *J. Mater. Sci. Lett.*, 11(1993)1227-1230.

### 1992

Selection of a Powder for Ceramic Injection Moulding

R.E.F.Q.Nogueira, M.J. Edirisinghe and D.T.Gawne, *J. Mater. Sci.*, 27(1992)6525-6531.

Development of Temperature-Heating Rate Diagrams for the Pyrolytic Removal of Binder used for Powder Injection Moulding

I.E.Pinwill, M.J. Edirisinghe and M.J.Bevis, *J. Mater. Sci.*, 27(1992)4381-4388.

Flow Behaviour of Ceramic Injection Moulding Suspensions

M.J. Edirisinghe, H.M.Shaw and K.L.Tomkins, *Ceram. International*, 18(1992)193-200.

Shrinkage during Removal of Organic Vehicle from Injection Moulded Aluminium Bodies  
I.E.Pinwill, M.J. Edirisinghe and M.J.Bevis, *Powder Metallurgy*, 35(1992)113-116.

On the Formation of Porosity during Removal of Organic Vehicle from Injection Moulded Ceramic Bodies  
H.M.Shaw, T.J.Hutton and M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 11(1992)1075-1077.

### **1991**

Binder Removal from Moulded Ceramic Bodies in Different Atmospheres  
M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 10(1991)1338-1341.

Fabrication of Aluminium Components by Injection Moulding: Role of Carbon Residue caused by Removal of the Organic Vehicle  
I.Pinwill, M.J. Edirisinghe and M.J.Bevis, *J. Mater. Sci. Lett.*, 10(1991)1107-1110.

Alcohol Based Binder Systems for Moulding Ceramic Materials, in Forming Science and Technology for Ceramics  
M.J. Edirisinghe, K.L.Tomkins and M.Patching, *J. Amer. Ceram. Soc.*, (1991)165-171.

Fabrication of Engineering Ceramics by Injection Moulding  
M.J. Edirisinghe, *Bull. Amer. Ceram. Soc.*, 70(1991)824-828.

The Effect of Processing Additives on the Properties of a Ceramic-Polymer Formulation  
M.J. Edirisinghe, *Ceram. International*, 17(1991)89-96.

Interfacial Factors Affecting the Incidence of Defects in Ceramic Mouldings  
J.R.G.Evans and M.J. Edirisinghe, *J. Mater. Sci.*, 26(1991)2081-2088.

On the Removal of Organic Vehicle from Moulded Ceramic Bodies  
J.R.G.Evans, M.J. Edirisinghe, J.K.Wright and J.Crank, *Proc. Roy. Soc. A*, 432(1991)321-340.

### **1990**

The Use of Silane Coupling Agents in Ceramic Injection Moulding: Effect on Polymer Removal  
M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 9(1990)673-674.

Particle Packing in Ceramic Injection Moulding  
J.K.Wright, M.J. Edirisinghe, J.G.Zhang and J.R.G.Evans, *J. Amer. Ceram. Soc.*, 73(1990)2653-2658.

Injection Moulding of Ceramics  
M.J. Edirisinghe, *Metals and Materials*, 6(1990)367-370.

Removal of Organic Binders from Moulded Ceramic Bodies  
M.J. Edirisinghe, *Proc. Brit. Ceram. Soc.*, 45(1990)109-122.

### **1989**

Degradation of Polyolefin Blends Used for Ceramic Injection Moulding  
J.K.Wright, J.R.G.Evans and M.J. Edirisinghe, *J. Amer. Ceram. Soc.*, 72(1989)1822-1828.

A Catalogue of Ceramic Injection Moulding Defects and Their Causes  
J.G.Zhang, M.J. Edirisinghe and J.R.G.Evans, *Industrial Ceramics*, 9(1989)72-82.

The Control of Sprue Solidification Time in Ceramic Injection Moulding  
G.Zhang, M.J. Edirisinghe and J.R.G.Evans, *J. Mater. Sci.*, 24(1989)840-848.

Properties of Ceramic Injection Moulding Formulations: Part III. Polymer Removal  
J.Woodthorpe, M.J. Edirisinghe and J.R.G.Evans, *J. Mater. Sci.*, 24(1989)1038-1048.

Systematic Development of the Ceramic Injection Moulding Process  
M.J. Edirisinghe and J.R.G.Evans, *Mater. Sci. & Eng A*. 109(1989)17-26.

On the Dispersion of Unary and Binary Ceramic Powders in Polymer Blends  
J.G.Zhang, M.J. Edirisinghe and J.R.G.Evans, *Proc. Brit. Ceram. Soc.*, 42(1989)91-99.

The Use of Modulated Pressure in Ceramic Injection Moulding  
J.G. Zhang, M.J. Edirisinghe and J.R.G. Evans, *J. Euro. Ceram. Soc.*, 5, 63-72, 1989

### **1988**

The Use of Modulated Pressure in Ceramic Injection Moulding  
J.G. Zhang, M.J. Edirisinghe and J.R.G. Evans, *J.Euro.Ceram.Soc.*, 5(1988)63-72.

Initial Heating Rate for Binder Removal from Ceramic Mouldings  
J.G.Zhang, M.J. Edirisinghe and J.R.G.Evans, *Materials Letters*, 7(1988)15-18.

The Use of Silane Coupling Agents in Ceramic Injection Moulding  
J.G.Zhang, M.J. Edirisinghe and J.R.G.Evans, *J. Mater. Sci.*, 23(1988)2115-2120.

Computer Simulating Solidification of Ceramic Injection Moulding Formulations  
M.J. Edirisinghe, *J. Mater. Sci. Lett.*, 7(1988)509-510.

An Oscillating Pressure Unit for Ceramic Injection Moulding, Part B. Performance  
M.J. Edirisinghe, J.G.Zhang and J.R.G.Evans, *Materials & Design*, 9(1988)85-93.

### **1987**

An Oscillating Pressure Unit for Ceramic Injection Moulding, Part A. Materials & Design  
M.J. Edirisinghe and J.R.G.Evans, *Materials & Design*, 8(1987)284-288.

Rheology of Ceramic Injection Moulding Formulations  
M.J. Edirisinghe and J.R.G.Evans, *Brit. Ceram. Trans. & J.*, 86(1987)18-22.

Properties of Ceramic Injection Moulding Formulations : Part II. Integrity of Mouldings  
M.J. Edirisinghe and J.R.G.Evans, *J. Mater. Sci.*, 22(1987)2267-2273.

Properties of Ceramic Injection Moulding Formulations : Part I. Melt Rheology  
M.J. Edirisinghe and J.R.G.Evans, *J. Mater. Sci.*, 22(1987)269-277.

The Compounding and Injection Moulding of Ceramics  
M.J. Edirisinghe and J.R.G.Evans, *Industrial Ceramics*, 7(1987)100-104.

Avoidance of Defects in Injection Moulded Technical Ceramics

P.S.Allan, M.J.Bevis, M.J. Edirisinghe, J.R.G.Evans and P.R.Hornsby, *J. Mater. Sci. Lett.*, 6(1987)165-166.

**1986**

Compounding Ceramic Powder Prior to Injection Moulding

M.J. Edirisinghe and J.R.G.Evans, *Proc. Brit. Ceram. Soc.*, 38(1986)67-80.

Review : Fabrication of Engineering Ceramics by Injection Moulding. II. Techniques

M.J. Edirisinghe and J.R.G.Evans, *Int. J. High Tech. Ceram.*, 2(1986)249-278.

Review : Fabrication of Engineering Ceramics by Injection Moulding I. Materials Selection

M.J. Edirisinghe and J.R.G.Evans, *Int. J. High Tech. Ceram.*, 2(1986)1-31.