

## Refereed Journal Papers

### *Accepted and in press*

M. de Saint Victor, C. Clarke, C.-C. Coussios and E. Stride, "Properties, Characteristics and Applications of Microbubbles for Sonothrombolysis", *Expert Opinion on Drug Delivery* (2013) – in press.

Ahmad, S. Stoyanov, E. Pelan, E. Stride, M. Edirisinghe. Preparation of ethyl cellulose fibres by the use of glass and steel needle electrospinning: a comparison. *Food Research International* (2013) – in press.

### *Published*

2013 (18) total 103

Labbaf S, Horsley H, Chang M, Stride E, James Malone-Lee J, Edirisinghe M, Rohn J. An encapsulated drug delivery system for recalcitrant urinary tract infection. *J. Roy. Soc. Interface* 2013 10 20130747 (cover article).

T. Millard, M. Endrizzi, L. Rigon, F. Arfelli, R. Menk, J. Owen, E. Stride and A. Olivo. Quantification of microbubble concentration through x-ray phase contrast imaging. *Appl. Phys. Lett.* 103, 114105.

Labbaf S, Deb S, Camma G, Stride E, Edirisinghe M. Preparation of multi-component drug delivery nanoparticles using a triple-needle electrohydrodynamic device. *Journal of Colloid & Interface Science* 2013, 409: 245-254.

Bayram, C., Ahmad, Z., Denkbaz, E. Stride, E., Edirisinghe. M. Electrohydrodynamic Printing of Silk Fibroin Fiber Structures. *Macromolecular Research* 21:339-342.

Chang, M. W., Edirisinghe, M., Stride, E. Ultrasound Mediated Release from Stimuli-Responsive Core-Shell Capsules. *J. Mat. Chem. B* 2013 1:3962-3971.

O'Brien, J-P, Ovenden, N., Stride, E. Surfactant shedding and gas diffusion during pulsed ultrasound through a microbubble contrast agent suspension. *Journal of the Acoustical Society of America*. 2013 134(2):1416-1427.

Megdi Eltayeb, Poonam Kaushik Bakhshi, Eleanor Stride and Mohan Edirisinghe. Preparation of solid lipid nanoparticles containing active compound by electrohydrodynamic spraying. *Food Research International* 53:88-95.

Panagiotis Sofokleous, Eleanor Stride, Mohan Edirisinghe. Preparation, characterization and release of amoxicillin from electrospun fibrous wound dressing patches. *Pharmaceutical Research* 2013 30(7):1926-38.

Ekemen, Z., Ahmad, Z., Stride, E., Edirisinghe, M., Kaplan, D. A Novel Approach to Fabricate Porous Structures of Silk Fibroin Based Materials via Electrohydrodynamic Bubbling. *Biomacromolecules* 2013 4(5):1412-22.

Gun, S., Edirisinghe, M., Stride, E. Encapsulation of superparamagnetic iron oxide nanoparticles in Poly- (lactide-co-glycolic acid) microspheres for biomedical applications. *Materials Science and Engineering C. Mater Sci Eng C Mater Biol Appl.* 2013 Aug 1;33(6):3129-37.

Hosny NA, Mohamedi G, Rademeyer P, Owen J, Wu Y, Tang MX, Eckersley RJ, Stride E, Kuimova MK, close, 2013, Mapping microbubble viscosity using fluorescence lifetime imaging of molecular rotors, *Proceedings of the National Academy of Sciences of the United States of America*, Vol:110, ISSN:0027-8424, Pages:9225-9230 (cover article)

Kamyar Firouzi, Eleanor Stride and Nader Saffari. A Theoretical Investigation of New Photoacoustic Contrast Agents. *J. Acoust. Soc. Am.* 2013 133: 3853–3862

Moeendarbary, E., Valon, L., Harris, A., Moulding, D., Thrasher, A., Stride, E., Mahadevan, L., Charras, G. The Cytoplasm of living cells behaves as poroelastic materials. *Nature Materials* 2013; 12, 253–261.

Thomas, D., Butler, M., Anderson, T., Pelekasis, N., Stride, E., Sboros, V. The acoustic signature of decaying resonant phospholipid microbubbles. *Physics in Medicine and Biology* 2013; 58(3):589-99.

Terence S. Leung; Jack E. Honeysett; Eleanor Stride; Jing Deng. Light propagation in a turbid medium with insonified microbubbles. *J. Biomed. Opt.* 18 (1), 015002 (January 04, 2013); doi: 10.1117/1.JBO.18.1.015002

Enayati, M., Al Mohazey, D., Edirisinghe, M., Stride, E. Stimulated release of Estradiol from PLGA micro and nano particulates using low frequency ultrasound. *Bioinspired, Biomimetic and Nanobiomaterials* 2013; 2(1) 3-10.

Panos Sofokleous, Eleanor Stride, William Bonfield, Mohan Edirisinghe. Design, Construction and Performance of a Portable Handheld Electrohydrodynamic Multi-Needle Spray Gun for Biomedical Applications. *Materials Science and Engineering C* 2013; 33: 213–223.

Oguzhan Gunduz, Zeeshan Ahmad, Eleanor Stride, Mohan Edirisinghe. Continuous Generation of Ethyl Cellulose Drug Delivery Nanocarriers from Microbubbles. *Pharmaceutical Research* 2013; 30(1):225-37. doi: 10.1007/s11095-012-0865-7

2012 (20) total 85

Adam Bohr, Jakob Kristensen, Mark Dyas, Mohan Edirisinghe and Eleanor Stride

Release profile and characteristics of electrosprayed particles for oral delivery of a practically insoluble drug. *Journal of the Royal Society Interface* 2012; 9: 2437-49.

Mohamedi, G., Azmin, M., Pastoriza-Santos, I., Huang, V., Pérez-Juste, J., Liz-Marzán, L., Edirisinghe, M., Stride, E. The Effects of Gold Nanoparticles on the Stability of Microbubbles. *Langmuir* 2012; 28: 13808–13815

J. Owen, B. Zhou, P. Rademeyer, M. Tang, Q. Pankhurst, R. Eckersley, E. Stride. Understanding the Structure and Mechanism of Formation of a New Magnetic Microbubble Formulation. *Theranostics* 2012; 2: 1127-1139 (**invited**)

D. H. Thomas, M Butler, T. Anderson, M. Emmer, H. Vos, M. Borden, E. Stride, N. de Jong, and V. Sboros. The “quasi-stable” lipid shelled microbubble in response to consecutive ultrasound pulses. *Appl. Phys. Lett.* 101, 071601 (2012); <http://dx.doi.org/10.1063/1.4746258>

Azmin, M., Mohamedi, G., Edirisinghe, M., Stride, E. Dissolution of Coated Microbubbles: The Effect of Nanoparticles and Surfactant Concentration. *Materials Science and Engineering C* 2012; 32: 2654-2658.

J. Owen, Q. Pankhurst and E. Stride. Magnetic targeting and ultrasound mediated drug delivery: benefits, limitations and combination. *International Journal of Hyperthermia* 2012;28:362-373.

Parhizkar, M., Edirisinghe, M., Stride, E. Effect of Operating Conditions and Liquid Physical Properties on the Size of Monodisperse Microbubbles Produced in a Capillary Embedded T-Junction Device. *Microfluidics and Nanofluidics*. doi:10.1007/s10404-012-1098-0

Poonam Kaushik Bakhshi, M. Rafique Nangrejo, Eleanor Stride and Mohan Edirisinghe. Application of electrohydrodynamic technology for folic acid encapsulation. *J. Food and Bioprocess Technology*, doi:10.1007/s11947-012-0843-4

Luo, C., Stoyanov, S., Stride, E., Pelan, E., Edirisinghe, M. A review of electrospinning versus synthetic fibre-forming technologies: Bridging the gap between laboratory and industrial fibre productions. *Chemical Society Reviews* 2012;41:4708-4735.

Sennoga CA, Yeh JS, Alter J, Stride E, Nihoyannopoulos P, Seddon JM, Haskard DO, Hajnal JV, Tang MX, Eckersley RJ. Evaluation of Methods for Sizing and Counting of Ultrasound Contrast Agents. *Ultrasound In Medicine And Biology* 2012;38:834-845.

Mulvana, H., Tang, M., Eckersley, R., Stride, E., Theoretical and Experimental Characterisation of Magnetic Microbubbles. *Ultrasound In Medicine And Biology* 2012;38:864-875.

Mulvana, H., Stride, E., Tang, M., Hajnal, J., Eckersley, R. The influence of gas saturation on microbubble stability. *Ultrasound In Medicine And Biology* 2012;38:1097-1100

Azmin, M., Harfield, C., Ahmad, Z., Edirisinghe, M., Stride, E. 2012 How do microbubbles and ultrasound interact? Basic physical, dynamic and engineering principles. *Current Pharmaceutical Design* 2012;18:2118-2134.

Ahmad, B., Gunduz, O., Stoyanov, S., Pelan, E., Stride, E., Edirisinghe, A Novel Hybrid System for the Fabrication of a Fibrous Mesh with Micro inclusions. *Carbohydrate Polymers* 89: 222-229 2012;89:222-229.

Gunduz, O., Ahmad, Z., Stride, E. Tamerler, C. Edirisinghe M. 2012 Bioinspired bubble design for particle generation. *Journal of Royal Society. Interface* 9:389-395

M. Enayati, E. Stride, M. Edirisinghe W. Bonfield. Modification of the release characteristics of estradiol encapsulated in PLGA particles via surface coating. *Therapeutic Delivery* 3: 209-226.

Gunduz O, Ahrnad Z, Stride E, Edirisinghe M, A device for the fabrication of multifunctional particles from microbubble suspensions. *Materials Science & Engineering C-Materials for Biological Applications* 2012;32:1005-1010.

Bohr A, Yang MS, Baldursdottir S, Kristensen J, Dyas M, Stride E, Edirisinghe M, Particle formation and characteristics of Celecoxib-loaded poly(lactic-co-glycolic acid) microparticles prepared in different solvents using electrospraying. *Polymer* 2012;53:3220-3229.

Nangrejo M, Bragman F, Ahmad Z, Stride E, Edirisinghe M, Hot electrospinning of polyurethane fibres. *Materials Letters* 2012;68:482-485.

Luo CJ, Stride E, Edirisinghe M, Mapping the Influence of Solubility and Dielectric Constant on Electrospinning Polycaprolactone Solutions. *Macromolecules* 2012;45:4669-4680.

*2011 (18) total 65*

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

Ahmad, Z., Nangrejo, M., Rasekh, M., Stride, E., Edirisinghe, M. Novel Electrically Driven Direct-Writing Methods with Managed Control on in-situ Shape and Encapsulation Polymer Forming. *International Journal of Material Forming* 2011, DOI: 10.1007/s12289-011-1085-0

Luo CJ, Stride E, Stoyanov S, Pelan E, Edirisinghe M, Electrospinning short polymer micro-fibres with average aspect ratios in the range of 10-200. *Journal of Polymer Research* 2011;18:2515-2522.

Ahmad, B., Stride, E., Edirisinghe, J.M. Calcium Alginate Foams Prepared by a Microfluidic T-Junction System: Stability and Food Applications, *Food and Bioprocess Technology*, in press, doi:10.1007/s11947-011-0650-3 Key: citeulike:9589804.

R.Bakhshi, Z.Ahmad, M.Soric, E.Stride and M.Edirisinghe. 2011. Nanoparticle delivery systems formed using electrically sprayed co-flowing excipients and active agent *J.Biomed. Nanotech.* 7:782-793.

Sofokleous, P., Chang, M., Gen, B., Stride, E., Edirisinghe, M. 2011. Controlled preparation of drug-exchange phase loaded polymeric fibres by co-axial electrospinning. *Bioinspired, Biomimetic and Nanobiomaterials* 1(1):48-56

Tang, M., Mulvana, H., Gauthier, T., Lim, A., Cosgrove, D., Eckersley, R., Stride E. 2011. Quantitative contrast-enhanced ultrasound imaging: a review of sources of variability. *Interface Focus* 1:520-539 (invited).

Chang, M. W., Stride, E., Edirisinghe, M. 2011. Nanostructured Microshells and Their Application in Controlled Release. *Therapeutic Delivery* 2: 1247-1257.

Bohr, A., Kristensen, J., Stride, E., Dyas, M., Edirisinghe, M. 2011. Preparation of microspheres containing low solubility drug compound by electrohydrodynamic spraying. *Int. J. Pharmaceutics*, 412: 59-67.

Martynov, S., Kostson, E., Saffari, N., Stride, E. 2011. Forced vibrations of a bubble in a liquid-filled elastic vessel. *J. Acoust. Soc. Am.* 130: 2700-2708. (\*)

O'Brien, J., Ovenden, N., Stride, E. 2011. Accounting for the stability of microbubbles to multi-pulse excitation using a lipid-shedding model. *J. Acoust. Soc. Am.* 130: EL180-185. (\*)

Mulvana, H., Stride, E., Tang, M., Hajnal, J., Eckersley, R. 2011. Temperature-Dependent Differences In The Nonlinear Acoustic Behavior Of Ultrasound Contrast Agents Revealed By High-Speed Imaging And Bulk Acoustics. *Ultrasound In Medicine And Biology* 37: 1509-1517.

Tang, M., Loughran, J., Stride, E., Zhang, D., Eckersley, R. 2011. Effect of nonlinear bubble shell property on ultrasound nonlinear propagation through microbubble populations at low acoustic pressure. *J. Acoust. Soc. Am.* 129: EL76-82.

Luo, C.J., Loh, S., Stride, E., Edirisinghe, M. 2011. Electrospinning and electrospinning of chocolate suspensions. *Food & Bioprocessing Technology* DOI: 10.1007/s11947-011-0534-6

Enayati, M., Chang, M., Bragman, F., Edirisinghe, M., Stride, E. 2011. Electrohydrodynamic Preparation of Particles, Capsules and Bubbles for Biomedical Engineering Applications. *Colloids and Surfaces A*, 382: 154-164.

Chang, M. W., Stride, E., Edirisinghe, M. 2011, Stimulus-responsive Liquids for Encapsulation Storage and Controlled Release of Drugs from Nano-shell Capsules. *Journal of the Royal Society Interface* 8: 451-456.

Ekemen, Z., Ahmad, Z., Edirisinghe, M., Stride, E. 2011, Forming of Protein Bubbles and Porous Films using Co-axial Electrohydrodynamic Flow Processing. *Macromolecular Materials & Engineering* 296: 8-13 (*featured as cover article*)

Enayati, M., Farook, U., Edirisinghe, M., Stride, E. 2011, Electrohydrodynamic preparation of polymeric drug-carrier particles: Mapping of the Process. *Int. J. Pharmaceutics* 404: 110-115.

2010 (12)

Chang, M. W., Stride, E., and Edirisinghe, M. 2010, A New Method for the Preparation of Monoporous Hollow Microspheres. *Langmuir* 26: 5115-5121.

Chang, M. W., Stride, E., and Edirisinghe, M. 2010, Controlling the thickness of hollow polymeric microspheres prepared by electrohydrodynamic atomization. *Journal of the Royal Society Interface* 7: S451-S460.

Enayati, M., Ahmad, Z., Stride, E., and Edirisinghe, M. 2010, Size mapping of electric field-assisted production of polycaprolactone particles. *Journal of the Royal Society Interface* 7: S393-S402.

Enayati, M., Ahmad, Z., Stride, E., and Edirisinghe, M. 2010, One-step electrohydrodynamic production of drug-loaded micro- and nanoparticles. *Journal of the Royal Society Interface* 7: 667-675.

Evans, J. R. G., Stride, E. P. J., Edirisinghe, M. J., Andrews, D. J., and Simons, R. R. 2010, Can oceanic foams limit global warming? *Climate Research* 42: 155-160.

Martynov, S., Wang, X. L., Stride, E. P., and Edirisinghe, M. J. 2010, Preparation of a Micro-Porous Alginate Gel Using a Microfluidic Bubbling Device. *International Journal of Food Engineering* 6: 3-8.

Mari, J. M., Hibbs, K., Stride, E., Eckersley, R. J., and Tang, M. X. 2010, An Approximate Nonlinear Model for Time Gain Compensation of Amplitude Modulated Images of Ultrasound Contrast Agent Perfusion. *IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control* 57: 818-829.

Mulvana, H., Stride, E., Hajnal, J. V., and Eckersley, R. J. 2010, Temperature Dependent Behavior of Ultrasound Contrast Agents. *Ultrasound in Medicine and Biology* 36: 925-934.

Stride, E. P. and Coussios, C. C. 2010, Cavitation and contrast: the use of bubbles in ultrasound imaging and therapy. Proceedings of the Institution of Mechanical Engineers Part H-Journal of Engineering in Medicine 224: 171-191. **(invited)**

Ahmad Z, Nangrejo M, Farook U, Stride E, Edirisinghe M, Bernardo E, Colombo P. Facile Ceramic Micro-Structure Generation Using Electrohydrodynamic Processing And Pyrolysis, In: Colombo P and Raj R, eds. Advances in Polymer Derived Ceramics and Composites, 2010. pp. 81-86.

Wang, X. L., Li, X., Stride, E., Huang, J., Edirisinghe, M., Schroeder, C., Best, S., Cameron, R., Waller, D., and Donald, A. 2010, Novel preparation and characterization of porous alginate films. Carbohydrate Polymers 79: 989-997.

Wang XL, Li XA, Stride E, Edirisinghe M. 2010. Fabrication Of Nanoporous Chitosan Membranes. NANO 5: 53, 60

2009(15)

Ahmad, Z., Stride, E., and Edirisinghe, M. 2009, Novel preparation of transdermal drug-delivery patches and functional wound healing materials. Journal of Drug Targeting 17: 724-729.

Ahmad, Z., Nangrejo, M., Edirisinghe, M., Stride, E., Colombo, P., and Zhang, H. B. 2009, Engineering a material for biomedical applications with electric field assisted processing. Applied Physics A-Materials Science & Processing 97: 31-37.

Barrack, T. and Stride, E. 2009, Microbubble Destruction During Intravenous Administration: A Preliminary Study. Ultrasound in Medicine and Biology 35: 515-522.

Chang, M. W., Stride, E., and Edirisinghe, M. 2009, A novel process for drug encapsulation using a liquid to vapour phase change material. Soft Matter 5: 5029-5036.

Enayati, M., Ahmad, Z., Stride, E., and Edirisinghe, M. 2009, Preparation of Polymeric Carriers for Drug Delivery with Different Shape and Size Using an Electric Jet. Current Pharmaceutical Biotechnology 10: 600-608.

Farook, U., Stride, E., and Edirisinghe, M. J. 2009, Stability of microbubbles prepared by co-axial electrohydrodynamic atomisation. European Biophysics Journal with Biophysics Letters 38: 713-718.

Farook, U., Stride, E., and Edirisinghe, M. J. 2009, Preparation of suspensions of phospholipid-coated microbubbles by coaxial electrohydrodynamic atomization. Journal of the Royal Society Interface 6: 271-277 (*featured as cover article and awarded best paper prize*).

Martynov, S., Stride, E., and Saffari, N. 2009, The natural frequencies of microbubble oscillation in elastic vessels. *Journal of the Acoustical Society of America* 126: 2963-2972.

Nangrejo, M., Bernardo, E., Colombo, P., Farook, U., Ahmad, Z., Stride, E., and Edirisinghe, M. 2009, Electrohydrodynamic forming of porous ceramic capsules from a preceramic polymer. *Materials Letters* 63: 483-485.

Pancholi, K., Stride, E., and Edirisinghe, M. 2009, In Vitro Method to Characterize Diffusion of Dye from Polymeric Particles: A Model for Drug Release. *Langmuir* 25: 10007-10013.

Pancholi, K., Ahras, N., Stride, E., and Edirisinghe, M. 2009, Novel electrohydrodynamic preparation of porous chitosan particles for drug delivery. *Journal of Materials Science-Materials in Medicine* 20: 917-923.

Stride, E., Tang, M. X., and Eckersley, R. J. 2009, Physical phenomena affecting quantitative imaging of ultrasound contrast agents. *Applied Acoustics* 70: 1352-1362 (**invited**).

Stride, E., Porter, C., Prieto, A. G., and Pankhurst, Q. 2009, Enhancement of Microbubble Mediated Gene Delivery by Simultaneous Exposure to Ultrasonic and Magnetic Fields. *Ultrasound in Medicine and Biology* 35: 861-868.

Stride, E. and Edirisinghe, M. 2009, Novel preparation techniques for controlling microbubble uniformity: a comparison. *Medical & Biological Engineering & Computing* 47: 883-892 (**invited**).

Stride, E. 2009, Physical Principles of Microbubbles for Ultrasound Imaging and Therapy. *Cerebrovascular Diseases* 27, 1-13. (**invited**)

2008(10)

Stride, E. 2008, The influence of surface adsorption on microbubble dynamics. *Philosophical Transactions of the Royal Society A-Mathematical Physical and Engineering Sciences* 366: 2103-2115. (**invited**)

Stride, E., Pancholi, K., Edirisinghe, M. J., & Samarasinghe, S. 2008, Increasing the nonlinear character of microbubble oscillations at low acoustic pressures. *Journal of the Royal Society Interface* 5: 807-811.

Stride, E. & Edirisinghe, M. 2008, Novel microbubble preparation technologies. *Soft Matter* 4: 2350-2359. (**invited**).

Ahmad, Z., Zhang, H. B., Farook, U., Edirisinghe, M., Stride, E., & Colombo, P. 2008, Generation of multilayered structures for biomedical applications using a novel tri-needle coaxial device and electrohydrodynamic flow. *Journal of the Royal Society Interface* 5: 1255-1261 (*featured as cover article*).



Chetty, K., Stride, E., Sennoga, C. A., Hajnal, J. V., & Eckersley, R. J. 2008, High-speed optical observations and simulation results of SonoVue microbubbles at low-pressure insonation. *IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control* 55: 1333-1342.

Pancholi, K. P., Farook, U., Moaleji, R., Stride, E., & Edirisinghe, M. J. 2008, Novel methods for preparing phospholipid coated microbubbles. *European Biophysics Journal with Biophysics Letters* 37: 515-520.

Farook, U., Edirisinghe, M. J., Stride, E., & Colombo, P. 2008, Novel co-axial electrohydrodynamic in-situ preparation of liquid-filled polymer-shell microspheres for biomedical applications. *Journal of Microencapsulation* 25: 241-247.

Nangrejo, M., Ahmad, Z., Stride, E., Edirisinghe, M., & Colombo, P. 2008, Preparation of polymeric and ceramic porous capsules by a novel electrohydrodynamic process. *Pharmaceutical Development and Technology* 13: 425-432.

Pancholi, K., Stride, E., & Edirisinghe, M. 2008, Dynamics of bubble formation in highly viscous liquids. *Langmuir* 24: 4388-4393.

Pancholi, K., Stride, E., & Edirisinghe, M. 2008, Generation of microbubbles for diagnostic and therapeutic applications using a novel device. *Journal of Drug Targeting* 16: 494-501.

2007(4)

Farook, U., Stride, E., Edirisinghe, M. J., & Moaleji, R. 2007, Microbubbling by co-axial electrohydrodynamic atomization. *Medical & Biological Engineering & Computing* 45: 781-789.

Farook, U., Zhang, H. B., Edirisinghe, M. J., Stride, E., & Saffari, N. 2007, Preparation of microbubble suspensions by co-axial electrohydrodynamic atomization. *Medical Engineering & Physics* 29: 749-754.

Jones, P. H., Marago, O. M., & Stride, E. P. J. 2007, Parametrization of trapping forces on microbubbles in scanning optical tweezers. *Journal of Optics A-Pure and Applied Optics* 9: S278-S283.

Nazhat, S. N., bou Neel, E. A., Kidane, A., Ahmed, I., Hope, C., Kershaw, M., Lee, P. D., Stride, E., Saffari, N., Knowles, J. C., & Brown, R. A. 2007, Controlled microchannelling in dense collagen scaffolds by soluble phosphate glass fibers. *Biomacromolecules* 8: 543-551.

2006(1)

Jones, P. H., Stride, E., & Saffari, N. 2006, Trapping and manipulation of microscopic bubbles with a scanning optical tweezer. *Applied Physics Letters* 89, no. 8.

2005(1)

Stride, E. & Saffari, N. 2005, Investigating the significance of multiple scattering in ultrasound contrast agent particle populations. *IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control* 52: 2332-2345.

2004(2)

Stride, E. & Saffari, N. 2004, The potential for thermal damage posed by microbubble ultrasound contrast agents. *Ultrasonics* 42: 907-913.

Stride, E. & Saffari, N. 2004, Theoretical and experimental investigation of the behaviour of ultrasound contrast agent particles in whole blood. *Ultrasound in Medicine and Biology* 30: 1495-1509.

2003 (2)

Stride, E., Saffari, N. 2003, Microbubble ultrasound contrast agents: a review. *Proceedings of the Institution of Mechanical Engineers Part H-Journal of Engineering in Medicine* 217: 429-447.

Stride, E., Saffari, N. 2003, On the destruction of microbubble ultrasound contrast agents. *Ultrasound in Medicine and Biology* 29: 563-573.

## **Book Chapters**

Eckersley, R., Stride, E. (forthcoming) Physics of microbubbles. In: Textbook of Contrast Media ed. Cosgrove, D. Informa Healthcare.

Stride, E. Microbubbles: New Developments and Perspectives. Frontiers of Neurology and Neuroscience - 'Translational Neurosonology' Eds. A. Alonso, M.G. Hennerici, S. Meairs.

Stride, E., Mulvana, H., Tang, M., Eckersley, R., Pankhurst, Q. Magnetic Microbubbles. In: Magnetic Nanoparticles: From Fabrication To Clinical Applications ed. Thanh, N. CRC Press/Taylor and Francis. ISBN: 9781439869321

O'Brien, J., Ovenden, N., Stride, E. 2011, Numerical Methods in Nonlinear Acoustics in Bubbly Liquids. in Current Trends in Computational Acoustics. Series edited by Vanhille, C., Campos-Pozuelo, C.. Research Signpost (Transworld Research Network)

Stride, E. 2006, Characterisation and Design of Microbubble-based Contrast Agents Suitable for Diagnostic Imaging. In: Contrast Media in Ultrasonography: Basic Principles and Clinical Applications. Ed. E. Quaia. Berlin: Springer-Verlag.

## **Thesis**

Stride, E. Characterisation and Design of Ultrasound Contrast Agent Particles, thesis submitted for the award of Doctor of Philosophy, University of London (submitted 04/12/04, viva voce examination 21/03/05).

## **Editorials**

Edirisinghe, M. and Stride, E. 2010 Scaling the heights-challenges in medical materials II. Journal of the Royal Society Interface 7: S501-S502.

Edirisinghe, M. and Stride, E. 2010 Scaling the heights-challenges in medical materials I. Journal of the Royal Society Interface 7: S377-S378.

Stride, E. 2010 Improved Functionality of the Online 2009 Subject Index. Ultrasound in Medicine and Biology 36: 1-1.

Stride, E. and Edirisinghe, M. 2009 Special issue on microbubbles: from contrast enhancement to cancer therapy. Medical & Biological Engineering & Computing 47: 809-811.

## Refereed Conference Proceedings

2013

Sojahrood, AJ., Stride, E., Karshafian, R., Kolios, MC. Nonlinear dynamics of polymer shell ultrasound contrast agents at 8-32 MHz ultrasonic excitations. IEEE Ultrasonics Symposium, 21-25<sup>th</sup> July, Prague, 2013

Fury, C., G lat, P., Harfield, C., Jones, P., Stride, E., Memoli, G. Experimental verification of the finite element modelling of acoustic microchannels IEEE Ultrasonics Symposium, 21-25<sup>th</sup> July, Prague, 2013.

Crake, C., de Saint Victor, M., Coviello, C., Owen, J., Coussios, C., Stride, E. Passive acoustic mapping of magnetic microbubbles in an *in vitro* flow model. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013 (*in press*).

Mohamedi, G., Hosny, N., Rademeyer, P., Park, Y., Owen, J., Pham, T., Joyce Wong, J., Kuimova, M., Stride, E. Investigating the effect of fabrication method on the stability and acoustic response of microbubble agents. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013 (*in press*).

Azmin, M., Rademeyer, P., Mohamedi, G., Edirisinghe, M., Liz-Marzan, L., Stride, E. Investigating the acoustic response of gold nanoparticle coated microbubbles . Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013 (*in press*).

O'Brien, J.P., Stride, E., Ovenden, N. The effect of surfactant shedding and gas diffusion on pressure wave propagation through an ultrasound contrast agent suspension. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013 (*in press*).

Harfield, C., Memoli, G., Jones, P., Ovenden, N., Stride, E. Investigating the Sensitivity of Investigating the sensitivity of microbubble acoustic response for biosensing applications. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013 (*in press*).

Honeysett, J.E., Stride, E., Deng, J., Leung, T.S. An algorithm for sensing venous oxygenation using ultrasound-modulated light enhanced by microbubbles, In: Oraevsky AA and Wang LV, eds. Photons Plus Ultrasound: Imaging and Sensing 2012, 2012.

Sinden D, Stride E, Saffari N, Iop. Approximations for acoustically excited bubble cluster dynamics. 10th Anglo-French Physical Acoustics Conference, 2012.

Harfield, C., Ovenden, N., Memoli, G., Jones, P., Stride, E. "Theoretical characterisation of coated microbubbles under acoustic and optical trapping". Anglo French Physical Acoustics Conference 2012 (AFPAC2012) Brighton Thistle Hotel. 18-20 January 2012

Honeysett J., E., Stride E., Leung T. Feasibility study of non-invasive oxygenation measurement in a deep blood vessel using acousto-optics and microbubbles. *Advances in Experimental Medicine and Biology* 737:277-83. (ISOTT conference paper refereed)

Honeysett, J.E., Stride, E., Leung, T.S. Microbubble enhancement of ultrasound-modulated optical sensing with incoherent light, In: Oraevsky AA and Wang LV, eds. *Photons Plus Ultrasound: Imaging and Sensing 2011*, 2011.

Honeysett, J., Leung, T., Stride, E. Ultrasound-modulated optical sensing of oxygenation enhanced by microbubbles. *Proc. SPIE* , January 2011, San Francisco, USA ( *in press*)

Mulvana, H., Eckersley, R., Browning, R., Tang, M., Pankhurst, Q., Wells, D., Stride, E. 2010 Enhanced Gene Transfection in vivo using Magnetic Localisation of Ultrasound Contrast Agents: Preliminary Results. *IEEE International Ultrasonics Symposium (IUS) Town & Country Inn & Convention Center San Diego, California, October 11-14, 2010 (in press)*

Honeysett, J., Leung, T., Stride, E. 2010 Feasibility study of non-invasive oxygenation measurement in the pulmonary artery using acousto-optics. *ISOTT, Ascona, Switzerland, July 2010 (in press)*.

Honeysett, J., Leung, T., Stride, E. 2010 Monte Carlo simulations of acousto-optics with microbubbles *SPIE 2010, San Diego, USA, January 2010. Proc. SPIE 7564, 75640K.*

Sinden, D., Stride, E., Saffari, N. 2010 On multi-bubble interactions. *Anglo-French Physical Acoustics Conference 10, Kendal, 18-22 January 2010 J. Phys. Conf. Ser. series. Institute of Physics (in press)*

Honeysett, J., Stride, E., and Leung, T. 2010, Monte Carlo simulations of acousto-optics with microbubbles. *Photons Plus Ultrasound: Imaging and Sensing 2010 7564:*

Mulvana H, Eckersley RJ Stride E, 2009 Temperature Behaviour of Ultrasound Contrast Agents. *Proc. IEEE International Ultrasonics Symposium Rome, 20<sup>th</sup>-23<sup>rd</sup> September, 2009. 1-5, pp.1239 – 1242.*

McCredie, A. J., Stride, E., and Saffari, N. 2009 Ultrasound Elastography to Determine the Layered Mechanical Properties of Articular Cartilage and the Importance of Such Structural Characteristics under Load. *Embc: 2009 Annual*

International Conference of the IEEE Engineering in Medicine and Biology Society, Vols 1-20 4262-4265.

McCredie, A., Stride, E., Saffari, N. 2008 Quasi-static and dynamic elastography of depth-dependent cartilage behaviour. 8th Anglo-French Physical Acoustics Conference, 8-10<sup>th</sup> December, Arcachon, France, J. Phys. Conf. Ser. series. Institute of Physics (in press)

Sinden, D., Stride, E., Saffari, N. 2008 The effects of nonlinear wave propagation on the stability of inertial cavitation. Anglo-French Physical Acoustics Conference, J. Phys. Conf. Ser. series. Institute of Physics (in press)

Stride, E., Tang, M., Eckersley, R. 2008 Physical Phenomena Affecting Quantitative Imaging of Ultrasound Contrast Agents. Proc. Inst. Acoustics Spring Conference. Univ. Reading 10<sup>th</sup> April, 2008.

Hibbs, K., Mari, J. M., Stride, E., Eckersley, R. J., Noble, A., Tang, M.X. 2007 Nonlinear propagation of ultrasound through microbubble clouds: A novel numerical implementation. 2007 IEEE Ultrasonics Symposium Proceedings, Vols 1-6 1997-2000.

Stride, E. Eckersley, R. Chetty, K. Sennoga, C. (2007) ULT-16-003-IP. Engineering Microbubble Agents for Enhanced Detectability in Therapeutic Applications. 19<sup>th</sup> International Congress on Acoustics, Madrid 2-7<sup>th</sup> September 2007. ULT-16-003-IP

Chetty, K., Sennoga, C. A., Hajnal, J. V., Eckersley, R. J., and Stride, E. 2006 High Speed Optical Observations and Simulation Results of Lipid Based Microbubbles at Low Insonation Pressures. IEEE International Ultrasonics Symposium, Vancouver, British Columbia, Canada October 3-6, 2006 1-5, pp. 1354-1357.

Stride, E. Eckersley, R. & Chetty, K. 2006 Dynamic Interactions between Contrast Agent Microbubbles: High Speed Camera Observations and Simulation Results. Proc. 6th International Symposium on Therapeutic Ultrasound (ISTU), Oxford University, 29<sup>th</sup> August - 2<sup>nd</sup> September. 911: 205-211.

Stride, E. (2006) Multiple Scattering of Ultrasound in Suspensions of Contrast Agent Particles: Simulations and Experimental. Proc. Institute of Acoustics Spring Conference, Southampton University, 3<sup>rd</sup>-4<sup>th</sup> April.

Stride, E., Saffari, N., & Wilkens, V. 2005, "Investigating the potential for thermal damage posed by microbubble ultrasound contrast agents: Experimental results", 2005 IEEE Ultrasonics Symposium, 1-4 pp. 1999-2002.

## **Invited Conference Presentations**

Owen, J., Rademeyer, P., Pankhurst, Q., Stride, E. Magnetic Targeting of Microbubbles at Physiologically Relevant Flow Rates. Leeds Microbubble Symposium 16-18 July 2013.

O'Brien, J.P., Stride, E., Ovenden, N. The effect of surfactant shedding and gas diffusion on pressure wave propagation through an ultrasound contrast agent suspension. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

Stride, E. Methods for microbubble contrast agent manufacture  
14th World Congress of Ultrasound in Medicine and Biology (WFUMB 2013)/16<sup>o</sup>  
Congress of the Latin American Federation of Ultrasound (FLAUS 2013)/43rd  
Sao Paulo Radiology Meeting (JPR'2013), May 2-5, 2013, at Transamerica Expo  
Center, in Sao Paulo, Brazil

Stride, E. Theranostic agents for ultrasound therapy  
14th World Congress of Ultrasound in Medicine and Biology (WFUMB 2013)/16<sup>o</sup>  
Congress of the Latin American Federation of Ultrasound (FLAUS 2013)/43rd  
Sao Paulo Radiology Meeting (JPR'2013), May 2-5, 2013, at Transamerica Expo  
Center, in Sao Paulo, Brazil

Stride, E., Owen, J., Mulvana, H., Pankhurst, Q., Tang, M., Eckersley, R. 2012.  
Magnetic microbubbles for localised imaging and drug delivery: Development,  
characterisation and preliminary application in vivo. Acoustics 2012 Hong Kong,  
Hong Kong Convention and Exhibition Center 14th-18th May 2012.

Mulvana, H., Eckersley, R., Browning, R., Tang, M., Pankhurst, Q., Hajnal, J, Stride,  
E. 2011. Magnetic Microbubbles: Development, Characterisation and Preliminary  
Application in vivo. Leeds Microbubble Symposium, July 4-6 2011.

Stride, E. 2010 Magnetic Microbubbles for Multimodality Imaging and Targeted  
Therapy, 38<sup>th</sup> Annual Meeting and Exposition of the Controlled Release Society.  
July 30 - August 3, 2010.

Stride, E. 2008 Magnetic Microbubbles for Localised Ultrasound Imaging and  
Therapy. UK Magnetics Society 22<sup>nd</sup> Ewing event. The Royal Society, 9<sup>th</sup>  
December 2008.

Stride, E. Porter, C., Prieto, A., Pankhurst, Q. 2008 Enhancement of microbubble  
mediated gene delivery by simultaneous exposure to ultrasonic and magnetic  
fields. Acoustics '08, Paris 29<sup>th</sup> June-5<sup>th</sup> July.

Stride, E. 2008 Engineering microbubbles for Ultrasound Imaging and Therapy  
.The 13<sup>th</sup> European Symposium on Ultrasound Contrast Imaging. 23<sup>rd</sup>-25<sup>th</sup>  
Rotterdam January 2008.

Stride,E., Edirisinghe,M. 2008 Electrodynamic forming of capsules and microspheres for drug delivery. 3rd International Conference on Smart Materials, Structures and Systems, 8-14th June, Acireale, Sicily, Italy,

Stride, E. Eckersley, R. Chetty, K. Sennoga, C. 2007 Engineering Microbubble Agents for Enhanced Detectability in Therapeutic Applications. 19<sup>th</sup> International Congress on Acoustics, Madrid 2-7<sup>th</sup> September 2007.

Stride, E. 2006 Dynamic Microbubble Interactions. International Sonoporation Symposium, Dundee University, 1<sup>st</sup> August 2006.



## Conference Presentations

2013 (19)

Owen, JW., Rademeyer, P., Stride, E. Magnetic targeting of microbubbles at physiologically relevant flow rates. Meeting of the Acoustical Society of America, San Francisco, 1-6 December 2013.

Sofokleous, P., Stride, E., Edirisinghe, M. A Fully Portable Handheld Electrohydrodynamic Multi-needle Spray Gun for Wound Healing Applications. 25th European Conference on Biomaterials Madrid, Spain, September 8-12<sup>th</sup> 2013.

Fury, C., G lat, P., Harfield, C., Jones, P., Stride, E., Memoli, G. Experimental verification of the finite element modelling of acoustic microchannels IEEE Ultrasonics Symposium, 21-25<sup>th</sup> July, Prague, 2013.

Sojahrood, AJ., Stride, E., Karshafian, R., Kolios, MC. Nonlinear dynamics of polymer shell ultrasound contrast agents at 8-32 MHz ultrasonic excitations. IEEE Ultrasonics Symposium, 21-25<sup>th</sup> July, Prague, 2013.

Owen, J., Rademeyer, P., Pankhurst, Q., Stride, E. Magnetic Targeting of Microbubbles at Physiologically Relevant Flow Rates. Leeds Microbubble Symposium 16-18 July 2013.

Crake, C., de Saint Victor, M., Coviello, C., Owen, J., Coussios, C., Stride, E. Passive acoustic mapping of magnetic microbubbles in an *in vitro* flow model. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

Mohamedi, G., Hosny, N., Rademeyer, P., Park, Y., Owen, J., Pham, T., Joyce Wong, J., Kuimova, M., Stride, E. Investigating the effect of fabrication method on the stability and acoustic response of microbubble agents. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

Azmin, M., Rademeyer, P., Mohamedi, G., Edirisinghe, M., Liz-Marzan, L., Stride, E. Investigating the acoustic response of gold nanoparticle coated microbubbles. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

O'Brien, J.P., Stride, E., Ovenden, N. The effect of surfactant shedding and gas diffusion on pressure wave propagation through an ultrasound contrast agent suspension. Joint Meeting of the Acoustical Society of America, The Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

Harfield, C., Memoli, G., Jones, P., Ovenden, N., Stride, E. Investigating the Sensitivity of Investigating the sensitivity of microbubble acoustic response for biosensing applications. Joint Meeting of the Acoustical Society of America, The

Canadian Acoustical Association and International Congress on Acoustics, Montreal, 2-7 June 2013.

Parhizkar, M., Stride, E., Edirisinghe, M. Effect of Geometry on Microbubble Formation and Size in an Embedded Capillary T-Junction Microfluidic device. Advances in Microfluidics & Nanofluidics, Notre Dame, IN, USA, 24-26 May 2013.

Stride, E. Methods for microbubble contrast agent manufacture  
14th World Congress of Ultrasound in Medicine and Biology (WFUMB 2013)/16<sup>o</sup>  
Congress of the Latin American Federation of Ultrasound (FLAUS 2013)/43rd  
Sao Paulo Radiology Meeting (JPR'2013), May 2-5, 2013, at Transamerica Expo Center, in Sao Paulo, Brazil

Stride, E. Theranostic agents for ultrasound therapy  
14th World Congress of Ultrasound in Medicine and Biology (WFUMB 2013)/16<sup>o</sup>  
Congress of the Latin American Federation of Ultrasound (FLAUS 2013)/43rd  
Sao Paulo Radiology Meeting (JPR'2013), May 2-5, 2013, at Transamerica Expo Center, in Sao Paulo, Brazil

Joshua W Owen, Paul Rademeyer, Quentin Pankhurst, Eleanor Stride.  
Imaging and retention of magnetic microbubbles at physiologically relevant shear rates  
245<sup>th</sup> American Chemical Society Meeting, Colloid and Surface Chemistry Technical Symposium, New Orleans, April 7<sup>th</sup>-11<sup>th</sup> 2013

Graciela Mohamedi, Neveen A Hosney, Paul Rademeyer, Yoonjee Park, Joshua Owen, Tuan Pham, Joyce Y Wong, Marina Kuimova, Eleanor Stride. Influence of fabrication method on functional properties of microbubble agents for theranostic applications. 245<sup>th</sup> American Chemical Society Meeting, Colloid and Surface Chemistry Technical Symposium, New Orleans, April 7<sup>th</sup>-11<sup>th</sup> 2013

Graciela Mohamedi, Paul Rademeyer, Mehrdad Azmin, Mohan Edirisinghe, Jorge Pérez-Juste, Isabel Pastoriza-Santos, Luis Liz-Marzán, Eleanor Stride.  
Investigating the acoustic response of gold nanoparticle coated microbubbles. 245<sup>th</sup> American Chemical Society Meeting, Colloid and Surface Chemistry Technical Symposium, New Orleans, April 7<sup>th</sup>-11<sup>th</sup> 2013

Harfield, C., Fury, C., Memoli, G., Jones, P., Stride, E. Investigating the Sensitivity of Microbubbles for Biosensing Applications. 18th European Symposium on Ultrasound Contrast Imaging. Rotterdam Hilton Hotel. January 18-21 2013.

Owen, J., Rademeyer, P., Pankhurst, Q., Stride, E. Magnetic Targeting of Microbubbles at Physiologically Relevant Flow Rates. 18th European Symposium on Ultrasound Contrast Imaging. Rotterdam Hilton Hotel. 16-18 January 2013.

Fury, C., Memoli, G., Gélât, P., Harfield, C., Jones, P., Stride, E. A technique for non-visual confirmation of acoustic fields in a microfluidic chip for the purposes of acoustic trapping and microbubble characterisation. Anglo French Physical Acoustics Conference 2013 Villa La Clythie, Frejus, France. 16-18 January 2013.

2012 (14)

Memoli, G., Harfield, C. J., Fury, C. R., Jones, P.H., Stride, E. Optical manipulation of microbubbles in presence of acoustical fields. IEEE International Ultrasonics Symposium, Dresden, Germany, October 7-10, 2012.

Spencer, N., Austen, B., Stride, E., Howe, F. A study of acute brain penetration of Omniscan after blood-brain barrier disruption by ultrasound in mice. ESMRMB 2012, Lisbon, Portugal from October 4-6, 2012.

Ekemen Z, Ahmad Z, Stride E, Edirisinghe M. Fabrication of bio-structures via microbubbling. Materials Science & Technology 2012, Pittsburgh, Pennsylvania, USA, October 07-11, 2012.

Mohamedi, G., Azmin, M., Liz-Marzan, L., Pastoriza-Santos, I., Juste, J., Edirisinghe, M., Stride, E., Effects of gold nanoparticles on the stability and non-linear response of phospholipid microbubbles. 12th International Symposium on Therapeutic Ultrasound, Heidelberg, Germany June 10-13 2012.

Owen, J., Zhou, B., Hayotte, N., Tang, M., Pankhurst, Q., Eckersley, R., Stride, E. Retention of magnetic microbubbles in a flow phantom. 12th International Symposium on Therapeutic Ultrasound, Heidelberg, Germany June 10-13 2012.

Stride, E., Owen, J., Mulvana, H., Pankhurst, Q., Tang, M., Eckersley, R. 2012. Magnetic microbubbles for localised imaging and drug delivery: Development, characterisation and preliminary application in vivo. Acoustics 2012 Hong Kong, Hong Kong Convention and Exhibition Center 14th-18th May 2012 (**invited**).

Stride, E., The use of nanoparticles for functionalisation of microbubbles in ultrasound imaging and therapy. Symposium on Biomaterials, Particles, Bubbles, Capsules & Fibres for Healthcare, University College London 18 April 2012 (**invited**)

Luo, C.J., Stride, E., Edirisinghe, M. Improving electrospinnability using marginal or non solvents. Electrospinning, Principles, Possibilities and Practice 2012, 21 - 22 March 2012, Institute of Physics, London, UK.

Owen, J., Zhou, B., Hayotte, N., Tang, M., Pankhurst, Q., Eckersley, R., Stride, E. Magnetic Microbubbles Therapeutic Ultrasound Interest Group, University College London, February 13 2012.

E. Moeendarbary et al. Cellular rheology and hydraulics. Poster presentation at Biophysical Society 56th Annual Meeting, February 25-29<sup>th</sup> 2012, San Diego, California, USA.

Harfield, C., Ovenden, N., Memoli, G., Jones, P., Stride, E. Theoretical characterisation of coated microbubbles under acoustic and optical trapping.

Anglo French Physical Acoustics Conference 2012 (AFPAC2012) Brighton Thistle Hotel. 18-20 January 2012

Owen, J., Zhou, B., Hayotte, N., Tang, M., Pankhurst, Q., Eckersley, R., Stride, E. Investigating retention of magnetic microbubbles in a flow phantom. 17th European Symposium on Ultrasound Contrast Imaging. Rotterdam Hilton Hotel. January 18-20 2012.

Thomas, D., Looney, P., Butler, M., Anderson, T., Emmer, M., Vos, H., de Jong, N., Borden, M., Stride, E., Pelekasis, N., Sboros, V. The “quasi-stable” lipid shelled microbubble in response to consecutive ultrasound pulses. 17th European Symposium on Ultrasound Contrast Imaging. Rotterdam Hilton Hotel. January 18-20 2012.

Hosny, N., Mohamedi, G., Wu, Y., Tang, M., Eckersley, R., Kuimova, M., Stride, E. Mapping Microbubble Viscosity Using Fluorescence Lifetime Imaging Microscopy (FLIM). 17th European Symposium on Ultrasound Contrast Imaging. Rotterdam Hilton Hotel. January 18-20 2012.

*2011 (17)*

E. Moeendarbary et al. The cytoplasm of living cells behaves as a poroelastic material. Poster presentation at 7th international conference on biological physics, University of California San Diego, 2011.

Ming-Wei Chang, Eleanor Stride and Mohan Edirisinghe “Ultrasound Controlled Release Using Volatile Core-Shell Capsules”. The details of the conference are: Particles 2011 Stimuli-Responsive Particles and Particle Assemblies 9-12 July 2011

Berlin, Germany <http://nanoparticles.org/Particles2011/>

Mohamed, G., Azmin, M., Liz-Marzan, L., Pastoriza-Santos, I., Juste, J., Edirisinghe, M., Stride, E., The Effects of Gold Nanoparticles on the Stability and Non-Linear Response of Microbubbles. Materials Research Society Fall Meeting 2011

Calvisi, M., Martynov, S., Stride, E. Numerical Modelling of Ultrasound Contrast Agent Microbubbles Using BE and FE Methods. WIMRC Forum 2011, Warwick University, UK (\*)

Hosny, N., Tang, M., Eckersley, R., Kuimova, M., Stride, E. Microbubble viscosity mapped using FLIM, Nano meets Spectroscopy, September 15-16<sup>th</sup> 2011. National Physical Laboratory

Hosny, N., Tang, M., Eckersley, R., Kuimova, M., Stride, E. Microbubble viscosity mapped using FLIM. Frontiers in Bioimaging. Royal Microscopic Society, September 20-21<sup>st</sup>, 2011. Manchester

Firouzi, K., Stride, E., Saffari, N. Investigating new photoacoustic contrast agents. 161st Meeting of the Acoustical Society of America, Seattle, May 2011.

O'Brien, J., Ovenden, N., Stride, E. 2011. On the Dissolution of Microbubble Contrast Agents in an ultrasound field. 161st Meeting of the Acoustical Society of America, Seattle, May 2011.

Sinden, D., Stride, E., Saffari, N. 2011. Quantitative and qualitative effects of viscosity and compressibility for multi-bubble cavitation. 161st Meeting of the Acoustical Society of America, Seattle, USA, May 2011.

Sinden, D., Stride, E., Saffari, N. 2011. The Influence of Fluid Compressibility and Viscosity on the Stability of Multi-Bubble Cavitation. 11th International Symposium on Therapeutic Ultrasound, New York City, USA, April 2011.

Mulvana, H., Eckersley, R., Browning, R., Tang, M., Pankhurst, Q., Hajnal, J., Stride, E. 2011. Magnetic Microbubbles for in vivo Manipulation: Development, Characterisation and Preliminary Application in vivo. 11th International Symposium on Therapeutic Ultrasound, New York City, USA, April 2011

Sinden, D., Stride, E., Saffari, N. 2011. Cavitation in High-Intensity Focused Ultrasound Therapy. British Applied Mathematics Colloquium, Birmingham, UK, April 2011

Honeysett, J., Stride, E., Leung, T. 2011. Ultrasound-modulated optical sensing of oxygenation enhanced by microbubbles. SPIE Photonics West: Photons Plus Ultrasound, 24th January 2011, San Francisco, USA.

Honeysett, J., Leung, T., Stride, E. 2011. Microbubbles as contrast agents for acousto-optic measurement of blood oxygenation: theoretical and experimental studies. 16th European Symposium on Ultrasound Contrast Imaging. Rotterdam, The Netherlands, 19-21 January 2010.

O'Brien, J., Ovenden, N., Mulvana, H., Eckersley, R., Tang, M., Stride, E. 2011. Nonlinear Propagation Models for ultrasound pulse propagation through a polydisperse bubble population. 16th European Symposium on Ultrasound Contrast Imaging. Rotterdam, The Netherlands, 19-21 January 2010.

Sinden, D., Stride, E., Saffari, N. 2011. Cavitation in models of wave propagation through tissue under high-intensity focused ultrasound. Anglo-French Physical Acoustics Conference 11, Frejus, France, 19-21 January 2011

Firouzi, K., Stride, E., Saffari, N. 2011. A numerical study of photoacoustic imaging of brain tumours. Anglo-French Physical Acoustics Conference 11, Frejus, France, 19-21 January 2011

Mulvana, H., Eckersley, R., Browning, R., Tang, M., Pankhurst, Q., Wells, D., Stride, E. 2010 Enhanced Gene Transfection in vivo using Magnetic Localisation of Ultrasound Contrast Agents: Preliminary Results. IEEE International Ultrasonics Symposium, San Diego, California, October 11-14, 2010.

Honeysett, J., Leung, T., Stride, E. 2010 Feasibility study of non-invasive oxygenation measurement in the pulmonary artery using acousto-optics. ISOTT, Ascona, Switzerland, July 2010.

Edirisinghe, M., Stride, E. 2010 Bubbling, Foaming and Capsule Preparation. Eufoam 2010, Borovets, Bulgaria, 14 – 16 July, 2010.

Sinden, D., Labouret, S., Coussios, C., Stride, E., Saffari, N. 2010 Multi-Bubble Interactions, and High Intensity Focussed Ultrasound Therapy, 10th International Symposium on Therapeutic Ultrasound, Tokyo, 9-12 June 2010.

Sinden, D., Stride, E., Saffari, N. 2010 Acoustical Society of America. Phase synchronisation and the collective instability oscillating bubble clouds, 159th Meeting of the Acoustical Society of America, Baltimore, Maryland, 19-23 April 2010 (postponed due to Volcanic ash cloud).

Edirisinghe, M., Stride, E. 2010 Bubbling using different devices. Materials Research Society Spring Meeting, San Francisco, USA, 5 - 10 April, 2010.

Enayati, M., Ahmad, Z., Stride, E., Edirisinghe, M. 2010 Fabrication of micro- and nano-scale estradiol-loaded particles via co-axial electrohydrodynamic processing, International Conference on Drug Discovery and Therapy, Dubai, UAE, February 2010.

Edirisinghe, M., Stride, E. 2010 Novel Microbubble and Microcapsule Preparation Methods for Imaging and Drug Delivery. International Symposium on Surface and Interface of Biomaterials, Hong Kong, 4-6 Jan, 2010.

Sinden, D., Stride, E., Saffari, N. 2010 On the stability of interacting bubbles, UK Therapeutic Ultrasound Interest Group, Institute of Cancer Research, 11 May 2010.

Honeysett, J., Leung, T., Stride, E. 2010 Microbubbles for Acousto-Optic Imaging Signal Enhancement. 15th European Symposium On Ultrasound Contrast Imaging. 21-22 January 2010, Rotterdam, The Netherlands.

Mulvana, H., Stride, E., Eckersley, R., Tang, M., 2010 Effect of Temperature on the Acoustic Characteristics and Stability of Ultrasound Contrast Agents. 15th European Symposium On Ultrasound Contrast Imaging 21-22 January 2010, Rotterdam, The Netherlands

Honeysett, J., Leung, T., Stride, E. 2010 Monte Carlo simulations of acousto-optics with microbubbles SPIE 2010, San Diego, USA, January 2010.

Sinden, D., Stride, E., Saffari, N. 2010 On multi-bubble interactions. Anglo-French Physical Acoustics Conference 10, Kendal, 18-22 January 2010

*2009 (9)*

Mulvana, H., Eckersley, R., Stride, E. 2009 Temperature Behaviour of Ultrasound Contrast Agents. IEEE International Ultrasonics Symposium Rome, 20th-23<sup>rd</sup> September, 2009.

Sinden, D., Stride, E., Saffari, N. 2009 The effect of visco-elasticity on the stability of inertial cavitation. International Society for Therapeutic Ultrasound, 23<sup>rd</sup> -26<sup>th</sup> September, Aix-en-Provence, France, September 2009.

Martynov, S., Kostson, E., Saffari, N., Stride, E. 2009 Modelling oscillations of a microbubble in an elastic vessel. International Society for Therapeutic Ultrasound, Aix-en-Provence, France, September 2009.

McCredie, A. J., Stride, E., and Saffari, N. 2009 Ultrasound Elastography to Determine the Layered Mechanical Properties of Articular Cartilage and the Importance of Such Structural Characteristics under Load. Embc: 2009 Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vols 1-20 4262-4265.

McCredie, A., Stride, E., Saffari, N. 2009. ultrasound elastography in native and engineered cartilage tissue. The European Society of Biomaterials, 7-11th September, Lausanne, Switzerland.

Edirisinghe, M., Farook, U., Enayati, M., Ahmad, Z., Stride, E. 2009. Novel electrically-driven devices and methods of the preparation of microbubbles and microcapsules. 13th International Conference and Surface and Colloid Science (ICSCS) and 83rd ACS Colloid and Surface Science Symposium, 14-19th June, New York City, USA,

Martynov, S., Stride, E., Saffari, N. 2009. Modelling of oscillations of a microbubble in an elastic vessel. The 157th Meeting of the Acoustical Society of America, 18th-22nd May, Portland, Oregon, USA,

Martynov, M., Stride, E., Saffari, N. 2009. Modelling of the dynamics of a coated microbubble in a blood vessel. The 14th European Symposium on Ultrasound Contrast Imaging. 21st-23rd January, Rotterdam, The Netherlands (**awarded best young researcher prize**)

*2008 (12)*

Martynov, S., Stride, E., Saffari, N. 2008. Numerical modelling of the dynamics of an encapsulated microbubble in a blood vessel. Therapeutic Ultrasound Group Meeting, 18<sup>th</sup> December, UCL, London, UK,

Sinden, D., Stride, E., Saffari, N. 2008 The effects of nonlinear wave propagation on the stability of inertial cavitation. Therapeutic Ultrasound Group Meeting. UCL 18<sup>th</sup> December 2008.

Martynov, S., Stride, E., Saffari, N. 2008. Numerical modelling of the dynamics of a microbubble in a blood vessel. 8th Anglo-French Physical Acoustics Conference, 8-10<sup>th</sup> December 2008, Arcachon, France.

McCredie, A., Stride, E., Saffari, N. 2008 Quasi-static and dynamic elastography of depth-dependent cartilage behaviour. 8th Anglo-French Physical Acoustics Conference, 8-10<sup>th</sup> December 2008, Arcachon, France.

Sinden, D., Stride, E., Saffari, N. 2008 The effects of nonlinear wave propagation on the stability of inertial cavitation. Anglo-French Physical Acoustics Conference, 8-10<sup>th</sup> December 2008, Arcachon, France.

Martynov, S., Stride, E., Saffari, N. 2008 microbubble dynamics under confinement in a blood vessel. Microbubbles for Ultrasound Imaging and Drug Delivery: New Applications with Bursting Bubbles 28<sup>th</sup> November 2008, Philips Research, High Tech Campus, Eindhoven, The Netherlands.

Stride, E. 2008 Engineering microbubbles for imaging and therapy. Symposium on Encapsulation for Drug Delivery & Microbubbling, 14th November, UCL, London, UK.

Pancholi, K., Stride, E., Edirisinghe, M. 2008 In-vitro method to measure and predict diffusion from a polymeric particle based drug delivery system. The 6th International Workshop on Drug Delivery Systems, Czech Republic, Liblice Castle, October 3 - 6 2008.

Farook, U., Stride, E., Edirisinghe, M. 2008 Stabilized phospholipid-coated microbubbles with low polydispersity index via co-axial electrohydrodynamic microbubbling. The 6th International Workshop on Drug Delivery Systems, Czech Republic, Liblice Castle, October 3 - 6 2008.

Stride, E., Porter, C., Prieto, A., Pankhurst, Q. 2008 Enhancement of microbubble mediated gene delivery by simultaneous exposure to ultrasonic and magnetic fields. Acoustics '08, Paris 29<sup>th</sup> June-5<sup>th</sup> July.

Martynov, S., Stride, E., Saffari, N. 2008 Numerical modelling of the dynamics of an encapsulated microbubble in a blood vessel. Therapeutic Ultrasound Group Meeting, Inst. Cancer Research 13<sup>th</sup> May 2008.

Stride, E., Tang, M., Eckersley, R. 2008 Physical Phenomena Affecting Quantitative Imaging of Ultrasound Contrast Agents. Inst. Acoustics Spring Conference. Univ. Reading 10<sup>th</sup> April, 2008.



#### *2007 (4)*

Farook, U., Pancholi, K., Moaleji, R., Stride, E., Edirisinghe, M. 2007 Novel Methods for Microbubble Preparation. IEEE International Ultrasonics Symposium New York, 28th-31st October, 2007.

Hibbs, K., Eckersley, R., Stride, E., Tang, M. 2007 Nonlinear Propagation of Ultrasound Through Microbubble Clouds - a Novel Numerical Implementation. IEEE International Ultrasonics Symposium New York, 28<sup>th</sup> -31<sup>st</sup> October, 2007.

Farook, U., Stride, E., Edirisinghe, M., Moaleji, R. 2007 Development of a Novel Technique for the Preparation of Microbubble Suspensions for Ultrasound Imaging and Drug Delivery. Poster presented by U. Farook at the Annual Scientific Meeting of IPEM (Institute of Physics and Engineering in Medicine) South East Group Thursday 29<sup>th</sup> March St Mary's Hospital, Portsmouth.

Stride, E., Eckersley, R., Chetty, K., Sennoga, C. 2007 Engineering the Acoustic Response of Coated Microbubbles. Anglo-French Physical Acoustics Conference. La Villa Clythia, Frejus 17-19<sup>th</sup> January.

#### *2006 (7)*

Stride, E., Chetty, K., Sennoga, C., Hajnal, J., Eckersley R. 2006 Engineering the Acoustic Response of Lipid Based Microbubbles: Simulations and High Speed Optical Imaging Results. 4th Joint meeting of the Acoustical Society of America and the Acoustical Society of Japan. 28<sup>th</sup> November - 2<sup>nd</sup> December 2006. Sheraton Waikiki Hotel, Hawaii.

Chetty, K., Stride, E., Sennoga, C., Hajnal, J., Eckersley R. 2006 High Speed Optical Observations and Simulation Results of Lipid Based Microbubbles at Low Insonation Pressures. IEEE Transactions on Ultrasonics, Ferroelectrics & Frequency Control. IEEE International Ultrasonics Symposium, Vancouver, British Columbia, Canada October 3-6. P1F-4/59.

Stride, E. 2006 Engineering Microbubble Ultrasound Contrast Agents. EPSRC Fellows Meeting, Lancaster University, 6<sup>th</sup>-7<sup>th</sup> September 2006 (**awarded best poster prize**).

Stride, E., Eckersley, R., Chetty, K. 2006 Dynamic Interactions between Contrast Agent Microbubbles: High Speed Camera Observations and Simulation Results. Proc. International Symposium on Therapeutic Ultrasound (ISTU), Oxford University, 29<sup>th</sup> August - 2<sup>nd</sup> September.

Stride, E. 2006 Multiple Scattering of Ultrasound in Suspensions of Contrast Agent Particles: Simulations and Experimental Results. Institute of Acoustics Spring Conference, Southampton University, 3<sup>rd</sup>-4<sup>th</sup> April 2006.

Stride, E. 2006 Engineering Microbubble Contrast Agents for Drug Delivery. Therapeutic Ultrasound Group Symposium, Institute of Cancer Research, London, February 2006.

Stride, E. 2006 Investigating the Dynamics of Coated Microbubbles for Drug Delivery Applications. Anglo-French Physical Acoustics Conference, Wye College, Kent, 17th-19th January 2006.

#### *2005 (2)*

Stride, E., Saffari, N., & Wilkens, V. 2005, "Investigating the potential for thermal damage posed by microbubble ultrasound contrast agents: Experimental results", 2005 IEEE Ultrasonics Symposium

Stride, E., Saffari, N. 2005 Investigating the significance of multiple scattering in ultrasound contrast agent suspensions. 4th Anglo-French Physical Acoustics Conference, Le Havre, France, January 2005.

#### *2004 (2)*

Stride, E., Saffari, N. 2004 Investigating the behaviour of microbubble ultrasound contrast agent particles in whole blood. 9th European Symposium on Ultrasound Contrast Imaging, Rotterdam, January 2004 (awarded prize for the best presentation).

Stride, E., Saffari, N. 2004 Modelling the dynamics of microbubble ultrasound contrast agent particles in whole blood. Anglo-French Physical Acoustics Conference, Wye College, Kent, 14<sup>th</sup> -16<sup>th</sup> January 2004.

#### *2003 (2)*

Stride, E., Dawson, P. Saffari, N. 2003 Characterisation and design of microbubble ultrasound contrast agents. Contrast Media Research Symposium, San Diego, USA, October 2003 (awarded prize for the best presentation).

Stride, E., Saffari, N. 2003 Investigating the potential for thermal damage posed by microbubble ultrasound contrast agents. Ultrasonics International, Granada, Spain, July 2003.

#### *2002 (2)*

Stride, E., Saffari, N. 2002 Investigating the destruction of microbubble ultrasound contrast agents. 2nd Anglo-French Physical Acoustics Conference, Wissant, France, December 2002.

Stride, E., Saffari, N. 2002 Modelling the destruction of ultrasound contrast agents. Institute of Physics Bio-medical Acoustics Meeting, Nottingham Trent University. September 2002.

## Invited Seminars

- 08/10/13    Engineering Bubbles, Institute Langevin, Paris
- 18/06/13    Fluorescence Lifetime Imaging for Characterisation of Microbubble Surface Properties  
Erasmus University, Rotterdam, The Netherlands
- 25/04/13    Fabrication and Functionalisation of Microbubble Agents for Ultrasound Imaging & Drug Delivery  
University of Colorado, USA
- 04/03/13    Engineering Bubbles  
Institute of Biomedical Engineering, Oxford, UK
- 22/03/11    Novel Methods for Manufacturing Microbubbles for Ultrasound Imaging and Therapy. University of Bath, UK
- 27/01/11    Engineering Microbubbles for Ultrasound Imaging and Therapy  
Dept. Chemistry, Imperial College London, UK
- 25/11/10    Engineering Microbubbles  
University of Florence, Italy
- 14/04/10    Microbubbles for Ultrasound Imaging and Therapy  
London Centre for Nanotechnology
- 09/04/10    Magnetic Microbubbles  
University of Twente, The Netherlands
- 07/05/09    Engineering Microbubbles for ultrasound imaging and therapy,  
University of Leeds, UK.
- 27/02/09    Engineering Microbubbles for ultrasound imaging and therapy,  
University of Dundee, UK.
- 23/09/08    Magnetic Microbubbles for Localised Ultrasound Therapy.  
Institute of Cancer Research, Sutton, UK.
- 07/02/08    Characterisation and Design of Microbubble Agents For Diagnostic And Therapeutic Applications.  
University of Twente, Enschede, The Netherlands.
- 14/02/07    Microbubbles for ultrasound imaging and therapy.  
Division of Bio-materials and Tissue Engineering. Eastman Dental Hospital, London, UK.
- 04/07/06    Designer Bubbles  
Royal Academy of Engineering Annual General Meeting,  
Royal College of Surgeons, London, UK.
- 29/06/06    Optical Trapping of Microbubble Ultrasound Contrast Agents.  
Gray Institute of Cancer Research, Northwood, UK.

- 21/06/06 Investigating the Dynamic Behaviour of Coated Microbubbles for Ultrasound Mediated Drug Delivery.  
Dept. of Imaging Sciences, Imperial College London, UK.
- 20/02/06 Engineering Ultrasound Contrast Agents  
Dept. Engineering Sciences, University of Oxford, UK.
- 25/11/05 Characterisation and design of microbubble ultrasound contrast agents.  
University of Dundee, Dept. Surgery and Molecular Oncology.
- 20/10/04 Heating enhancement produced by microbubble ultrasound contrast agents.  
Physikalisch-Technische Bundesanstalt, Braunschweig, Germany.
- 06/08/03 Characterisation and design of microbubble ultrasound contrast agents.  
Institute of Cancer Research, Sutton, UK.

## APPENDIX II - RESEARCH TEAM

### *Postdoctoral Research Staff*

**01/10/06-30/09/07 (full time) Dr. Reza Moaleji**

Role: Microbubble preparation and characterisation (on project EP/E012434/1)

Current position: Investment Analyst (London)

**01/05/07-31/10/07 (part time) Dr. Ana Garcia Prieto**

Role: Magnetic field modelling (on HEIF project)

Current position: postdoctoral researcher (Spain)

**01/05/07-31/10/07 (part time) Dr. Xin Xie**

Role: Nanoparticle preparation (on HEIF project)

Current position: postdoctoral researcher (China)

**01/05/07-31/10/07 (part time) Dr. Colin Porter**

Role: Gene transfection experiments (on HEIF project)

Current position: Secondary School Teacher (London)

**11/07/07-10/07/09 (full time) Dr. Sergey Martynov**

Role: Modelling microbubble dynamics (on project EP/E029310/1)

Current position: postdoctoral researcher (UCL Chemical Engineering)

**01/01/08-31/12/08 (full time) Dr. Ketan Pancholi**

Role: Ultrasound driven diffusion experiments (on project EP/F031122/1)

Current position: Lecturer, Robert Gordon University, Aberdeen (UK)

**23/06/08-22/06/11 (full time) Dr. David Sinden**

Role: Modelling cavitation (on project EP/F025750/1)

Current position: postdoctoral researcher

**01/05/09-31/07/10 (full time) Dr. Xiang Li**

Role: Microbubble preparation and characterisation

Current position: junior academic, Zhejiang University, (China)

**01/10/09-30/09/10 (full time) Dr. Raheleh Bakhshi**

Role: Development of novel insulin delivery system (on PhD plus programme)

Current position: postdoctoral researcher (Canada)

**16/04/10-30/09/10 (full time) Dr. Zeeshan Ahmad**

Role: Generation of novel structures using co-flow in needles in an electric field

Current position: Senior Lecturer, Portsmouth University

**01/10/10-31/10/11 (full time) Dr. Rafique Nangrego**

Role: Generation of novel structures using co-flow in needles in an electric field

Current position: postdoctoral researcher

**01/01/12-15/11/12 (full time) Dr. Ming-Wei Chang**

Role: Microbubble preparation and characterisation (on project EP/G031754/1)  
Current position: Lecturer, Shanghai University

**30/09/13-** Dr Jeong Yu Lee  
Role: Micro/nanocapsule preparation and characterisation (on project EP/G031754/1)  
Current position: n/a

*PhD students (principal supervision)*

**Sep 2013- Shuning Bian**  
Funding: Doctoral Training Centre  
Supervision: joint with Dr. Robert Carlisle  
Thesis: Scanning Con-focal Microscopy for monitoring ultrasound mediated drug delivery

**Sep 2012- Calum Crake**  
Funding: Doctoral Training Centre  
Supervision: joint with Prof. Constantin Coussios  
Thesis: Magnetic Microbubbles for Sonothrombolysis (working title)

**Sep 2012- Marie de St. Victor**  
Funding: Doctoral Training Centre  
Supervision: joint with Prof. Constantin Coussios  
Thesis: Magnetic Microbubbles for Sonothrombolysis (working title)

**Sep 2012- Paul Rademeyer**  
Funding: Doctoral Training Centre  
Supervision: Principal supervisor  
Thesis: Acoust-Optical Microbubble Characterisation (working title)

**Sep 2012- Claire Walsh**  
Funding: Doctoral Training Centre  
Supervision: Joint with Dr. Nick Ovenden and Dr. Umber Cheema  
Thesis: Microbubble Dynamics in Decompression Sickness (working title)

**Sep 2011- Tom Millard**  
Funding: EPSRC studentship  
Supervision: joint with Dr. A. Olivo (UCL Medical Physics)  
Thesis: Phase Contrast Microbubble Imaging (working title)

**Feb 2011- Phillip Alexander**  
Funding: Brasenose College  
Supervision: joint with Dr. Robert Carlisle  
Thesis: Nanoparticulate Delivery across the Blood Brain Barrier (working title)

**Feb 2011- Joshua Owen**  
Funding: Royal Institution Studentship

Supervision: Principal supervisor  
Thesis: Magnetic microbubbles (working title)

**Feb 2011- Graciela Mohamedi**

Funding: Research Assistantship  
Supervision: Principal supervisor  
Thesis: Nanoparticle coated microbubbles (working title)

**Oct 2010- Caroline Harfield**

Funding: UCL Impact studentship with National Physical Laboratory  
Supervision: Principal supervisor  
Thesis: Optical and acoustic confinement of coated microbubbles (working title)

**Nov 2010- Sumeetra Gun**

Funding: self-funded  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Micro and nanocapsules for identification and treatment of Alzheimer's disease (working title)

**Sep 2010- Maryam Parhizkar**

Funding: self-funded  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Microfluidic devices for preparation of "smart" bubbles (working title)

**Sep 2010- Panos Sofokleous**

Funding: self-funded  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Advanced electrohydrodynamic processing techniques (working title)

*Completed*

**Feb 2010- Bilal Ahmad**

Funding: EPSRC Industrial CASE studentship with Unilever  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Microencapsulation technology for engineering of food products

**Sep 2009- Mehrdad Azmin**

Funding: EPSRC project studentship  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Engineering microbubbles for enhanced non-linear response

**Oct 2009-Jul 2013 Zeynep Ekemen**

Funding: Self-funded  
Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Preparation of encapsulated protein films

**Jan 2010-Jun 2013 Adam Bohr**

Funding: Danish Science, Technology & Innovation Agency with Life Cycle Pharma



Supervision: joint with Prof. M. Edirisinghe (Mech Eng)  
Thesis: Investigation of the Formulation, Characteristics and Performance of  
Micro and Nano Composite Drug Particles Intended for Oral Administration

**Feb 2010- Oguz Gunduz**

Funding: Islamic Development Bank

Supervision: joint with Prof. M. Edirisinghe (Mech Eng)

Thesis: Microfluidic devices for preparation of encapsulated structures

**Nov 2008- Jean-Pierre O'Brien**

Funding: Departmental doctoral training account

Supervision: joint with Dr. N. Ovenden (Maths)

Thesis: Ultrasound propagation through bubbly media

**Oct 2009- Jack Honeysett**

Thesis: Microbubbles for enhancement of acousto-optic imaging

Funding: UCL Doctoral Training Centre

Supervision: joint with Dr. Terence Leung (Medical Physics)

**Oct 2008-Oct 2012 Emad Moeendarbary**

Funding: UCL Overseas research scholarship

Supervision: joint with Dr. G. Charras (London Centre for Nanotechnology)

Thesis: Microscale modelling of the cellular matrix

**Sep 2008- Oct 2011 Ming-Wei Chang (Mech Eng)**

Funding: UCL Overseas research scholarship

Supervision: joint with Prof. M. Edirisinghe (Mech Eng)

Thesis: Development of a phase change agent for extravascular imaging

**Sep 2008-Oct 2011 Marjan Enayati (Mech Eng)**

Funding: UCL Overseas research scholarship

Supervision: joint with Prof. M. Edirisinghe (Mech Eng)

Thesis: Development of polymeric capsules for controlled drug release

**Sep 2005-Nov 2008 Ketan Pancholi**

Funding: Self-funded

Supervision: joint with Prof. M. Edirisinghe (Mech Eng)

Thesis: Microfluidic device design and engineering

**Sep 2006-Jul 2009 Uthmankandu Farook**

Funding: UCL Self-funded

Supervision: joint with Prof. M. Edirisinghe (Mech Eng)

Thesis: Novel preparation techniques for microbubbles and microcapsules

*PhD students (secondary supervision)*

**Sep 2008-2012 Chaojie Luo**

Thesis: Electrospinning of advanced materials

**Sep 2006-2010 Rotchana Prapainop**

Thesis: Development of an assessment method for refrigerant performance comparison

**Sep 2006-2010      Alexandra McCredie**

Thesis: Ultrasonic characterisation of engineered cartilage