REF 2014: Research outputs (REF2) (sorted by title)

13 – Electrical and Electronic Engineering, Metallurgy and Materials

<u>A disposable sensor for point of care wound pH monitoring.</u> The Analyst, 136 (22). pp. 4692-4695. [Journal article]

A pilot study of a low-tilt biphasic waveform for transvenous cardioversion of atrial fibrillation: Improved efficacy compared with conventional capacitor-based waveforms in patients. PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY, 31 (8). pp. 1020-1024. [Journal article]

A support vector machine for predicting defibrillation outcomes from waveform metrics. Resuscitation, 85 (3). pp. 343-349. [Journal article]

<u>Acetylene–argon plasmas measured at a biased substrate electrode for diamond-like carbon deposition:</u> <u>I. Mass spectrometry.</u> Plasma Sources Science and Technology, 20 (015003). [Journal article]

Adsorption of bovine serum albumin on amorphous carbon surfaces studied with dip pen <u>nanolithography.</u> Applied Surface Science, 258 (1). pp. 361-369. [Journal article]

<u>Amorphous carbon interlayers for gold on elastomer stretchable conductors.</u> Journal of Phys D, Applied Physics , 44 (24). 245301-9pp. [Journal article]

<u>An investigation into thermoplastic matrix 3D woven carbon fibre composites.</u> Journal of Reinforced Plastics and Composites, 31 (13). pp. 863-873. [Journal article]

Analytical elastic stiffness model for 3D woven orthogonal interlock composites. Composites Science and Technology, 70 . pp. 1597-1604. [Journal article]

Application of azo dyes as dosimetric indicators for enhanced photocatalytic solar disinfection (ENPHOSODIS). Journal of Photochemistry & Photobiology, A: Chemistry, 218 . pp. 185-191. [Journal article]

Arm and wrist surface potential mapping for wearable ECG rhythm recording devices: a pilot clinical study. Journal of Physics: Conference Series, 450 ((2013) 012026). pp. 1-8. [Journal article]

Assessment of an osteoblast-like cell line as a model for human primary osteoblasts using Raman spectroscopy. Analyst, 137 (7). pp. 1559-1569. [Journal article]

<u>Atmospheric Pressure Plasma Treated Carbon Fibre Weave: A Flexible Approach to Wound</u> <u>Monitoring.</u> Electrochemistry Communications, 33 . pp. 99-101. [Journal article]

Biological responses to hydroxyapatite surfaces deposited via a co-incident microblasting technique, BIOMATERIALS, 31 (2010). pp. 515-522. [Journal article]

Catalyst-Free Efficient Growth, Orientation and Biosensing Properties of Multilayer Graphene Nanoflake Films with Sharp Edge Planes. ADVANCED FUNCTIONAL MATERIALS, 18 (21). pp. 3506-3514. [Journal article]

<u>Characterization of hollow cathode and parallel plate microplasmas: scaling and breakdown.</u> Plasma Sources Science and Technology, 20 (2). 025011. [Journal article]

<u>Chemical Grafting of Poly(ethylene glycol) Methyl Ether Methacrylate ontoPolymer Surfaces by</u> <u>Atmospheric Pressure Plasma Processing.</u> Langmuir, 26 (3). pp. 1894-1903. [Journal article]

<u>Comparative in vitro cytotoxicity study of carbon nanotubes and titania nanostructures on human lung</u> <u>epithelial cells.</u> Journal of Hazardous Materials, 191 . pp. 56-61. [Journal article]

Degradation and accelerated ageing of poly(ether block amide) thermoplastic elastomers. Polymer Engineering and Science, 51 (11). pp. 2203-2209. [Journal article]

Deposition of TiO2 thin films on steel using a microwave activated chemical bath. SURFACE & COATINGS TECHNOLOGY, 203 (23). pp. 3614-3617. [Journal article]

<u>Determination of in-plane shear modulus of 3D woven composites with large repeat unit cells.</u> Plastics, Rubber and Composites, 41 (4-5). pp. 194-198. [Journal article]

Eigenleads: ECG Leads for Maximizing Information Capture and Improving SNR. IEEE Transactions on Information Technology in Biomedicine, 14 (1). pp. 69-78. [Journal article]

<u>Elimination of water pathogens with solar radiation using an automatedsequential batch CPC</u> <u>reactor.</u> Journal of Hazardous Materials, 196 . pp. 16-21. [Journal article]

<u>Enhanced Field Emission and Improved Supercapacitor Obtained from Plasma-Modified Bucky</u> <u>Paper.</u> Small, 7 (5). pp. 688-693. [Journal article]

Estimation performance of a reduced lead system during continuous 12-lead ECG ST-segment monitoring. Journal of Electrocardiology, 45 (6). pp. 604-608. [Journal article]

Evolution of mechanical properties in a 7075 Al-alloy subject to natural ageing. Materials and Design, 49 . pp. 160-167. [Journal article]

Experimental and numerical investigation of capillary flow in SU8 and PDMS microchannels with integrated pillars. Microfluidics and Nanofluidics, 7 (4). p. 451. [Journal article]

Fatigue and biocompatibility properties of a poly(methyl methacrylate) bonecement with multi-walled carbon nanotubes. Acta Biomaterialia, 8 . pp. 1201-1212. [Journal article]

<u>Glutathione-mediated release of Bodipy® from PEG cofunctionalized gold nanoparticles.</u> International Journal of Nanomedicine, 7 . pp. 4007-4022. [Journal article]

Graphene oxide for electrochemical sensing applications. Journal of Materials Chemistry, 21 (38). pp. 14725-14731. [Journal article]

Inactivation and injury assessment of Escherichia coli during solar and photocatalytic disinfection in LDPE bags. Chemosphere, 85 (7). pp. 1160-1166. [Journal article]

Inactivation of clinically relevant pathogens by photocatalytic coatings. Journal of Photochemistry and Photobiology A: Chemistry, 216 . pp. 303-310. [Journal article]

Influence of surface topography on osteoblast response to fibronectin coated calcium phosphate thin films. Colloids and Surfaces B: Biointerfaces, 78 (2). pp. 283-290. [Journal article

<u>Inhibition of lens epithelial cell growth via immobilisation of hyaluronic acid on atmospheric pressure</u> <u>plasma modified polystyrene.</u> Soft Matter, 7 . pp. 608-617. [Journal article]

Integrated urate sensors for detecting wound infection. ELECTROCHEMISTRY COMMUNICATIONS, 10 (5). pp. 709-713. [Journal article]

<u>Internal strain measurement and cure monitoring of 3d angle interlock woven carbon fibre</u> <u>composites.</u> Composites Part B: Engineering, available online . [Journal article]

Method for forming a sector for a nacelle lipskin. [Patent]

<u>Modeling the geometric characteristics of five-dimensionally woven composites.</u> Journal of Reinforced Plastics and Composites , 29 (23). 3475-3479 . [Journal article]

<u>Modelling of shear stress experienced by endothelial cells cultured on microstructured polymer</u> <u>substrates in a parallel plate flow chamber.</u> Biotechnology and bioengineering, 108 (5). pp. 1148-1158. [Journal article]

Edit modelling the geometry of the repeat unit cell of three-dimensional weave architectures. Journal of Textile Institute, 101 (7). pp. 679-685. [Journal article]

<u>Monitoring cellular behaviour using Raman spectroscopy for tissue engineering and regenerative</u> <u>medicine applications.</u> Journal of Materials Science: Materials in Medicine, 21 (8). pp. 2317-2324. [Journal article]

Monitoring the Degree of Conversion of Cyclic Butylene Terephthalate using Dielectric Analysis. POLYMERS & POLYMER COMPOSITES, 16 (6). pp. 365-373. [Journal article] *Nanocrystalline ruthenium oxide dispersed Few Layered Graphene (FLG) nanoflakes as supercapacitor electrodes.* Journal of Materials Chemistry, 22 . pp. 14944-14950. [Journal article]

Numerical Simulation of the Four Roll Bending Process. Materials and Manufacturing Processes, 27 (4). pp. 370-376. [Journal article]

<u>On the possibility of long path breakdown affecting the Paschen curves for microdischarges.</u> Plasma Sources Science and Technology, 21 (3). 035016. [Journal article]

<u>Osteoblast-like cell response to calcium phosphate coatingchemistry and morphology on etched silicon</u> <u>surfaces.</u> Journal of Materials Science:Materials in Medicine, Journal no. 10856 . pp. 835-851. [Journal article]

<u>Patterned cell culture substrates created by hot embossing of tissue culture treated polystyrene.</u> Journal of Materials Science: Materials in Medicine, online . [Journal article]

Photocatalytic inactivation of Cryptosporidium parvum on nanostructured titanium dioxide films. Journal of Water and Health, 08 (1). p. 83. [Journal article

Photocatalytic inactivation of E. coli in surface water using immobilised nanoparticle TiO2 films. Water Research, 43 (1). p. 47. [Journal article]

<u>Photolithographic structuring of stretchable conductors and sub-kPa pressure sensors.</u> Journal of Micromechanics and Microengineering, 21 (11). p. 115010. [Journal article]

Photovoltaic Applications of Silicon Nanocrystal Based Nanostructures Induced by Nanosecond Laser Fragmentation in Liquid Media. The Journal of Physical Chemistry C, 115 (12). pp. 5084-5093. [Journal article]

<u>Plasma-€ "Liquid Interactions at Atmospheric Pressure for Nanomaterials Synthesis and Surface</u> <u>Engineering.</u> Plasma Processes and Polymers, 9 (11-12). pp. 1074-1085. [Journal article]

Plasma-Polyplumbagin modified microfiber probes: a functional material approach to monitoring vascular access line contamination. ACS: Applied Materials and Interfaces, Web . [Journal article]

Polyethylene glycol functionalized gold nanoparticles:the influence of capping density on stability in various media. Gold Bulletin , on line first . [Journal article]

<u>Probing the Thermal Deoxygenation of Graphene Oxide Using High-Resolution In Situ X-ray-Based</u> <u>Spectroscopies.</u> The Journal of Physical Chemistry C, 115 . pp. 17009-17019. [Journal article]

<u>Protein adhesion and cell response on atmospheric pressure dielectric barrier discharge-modified</u> <u>polymer surfaces.</u> ACTA BIOMATERIALIA, 6 (7). pp. 2609-2620. [Journal article]

Raman spectroscopic monitoring of the osteogenic differentiation of human mesenchymal stem cells. The Analyst, 136 . pp. 2471-2481. [Journal article]

<u>Rapid Microwave Synthesis of CO Tolerant Reduced Graphene Oxide-Supported PlatinumElectrocatalysts</u> <u>for Oxidation of Methanol.</u> Journal Of Physical Chemistry C, 114 . pp. 19459-19466. [Journal article]

<u>Selection of optimal recording sites for limited lead body surface potential mapping in myocardial</u> <u>infarction and left ventricular hypertrophy.</u> Journal of Electrocardiology, 41 (3). pp. 264-271. [Journal article]

Self-Assembled Growth, Microstructure, and Field-Emission High-Performance of Ultrathin Diamond Nanorods. ACS NANO, 3 (4). pp. 1032-1038. [Journal article]

<u>Silicon Nanocrystals in Liquid Media: Optical Properties and Surface Stabilization by Microplasma-</u> <u>Induced Non-Equilibrium Liquid Chemistry.</u> Advanced Functional Materials, 22 (5). pp. 954-964. [Journal article]

<u>Solar photocatalytic disinfection of water with immobilised titanium dioxide in re-circulating flow CPC</u> <u>reactors.</u> Applied Catalysis B: Environmental, 128 . p. 126. [Journal article]

Sputter deposited bioceramic coatings: surface characterisation and initial protein adsorption studies using surface-MALDI-MS. Journal of Materials Science: Materials in Medicine, 22 . pp. 71-84. [Journal article] *Standardization of reduced and optimal lead sets for continuous electrocardiogram monitoring: where do we stand?* Journal of Electrocardiology, 41 (6). pp. 458-465. [Journal article]

Surface-engineered silicon nanocrystals. Nanoscale, 5 . pp. 1385-1398. [Journal article]

The effect of 3D weaving and consolidation on carbon fiber tows, fabrics, and composites. Journal of Reinforced Plastics and Composites, 29 (20). pp. 3162-3170. [Journal article]

The effect of serrated yielding on the determination of r-values in aluminium alloys and yield locus calibration. Materials Science and Engineering: A, 527 (29-30). p. 7557. [Journal article]

<u>The Influence of Through-The-Thickness Binder Yarn Count on Fibre Volume Fraction, Crimp and</u> <u>Damage Tolerance Within 3D Woven Carbon Fibre Composites.</u> POLYMERS & POLYMER COMPOSITES, 17 (5). pp. 303-312. [Journal article]

The Role of Enamel Proteins in Protecting Mature Human Enamel Against Acidic Environments: A Double Layer Force Spectroscopy Study. Biointerphases, 7 (1-4). [Journal article]

Titania nanotube porosity controls dissolution rate of sputter deposited calcium phosphate (CaP) thin film coatings. RSC Advances, Advance Article . [Journal article]

<u>Ultrasmall radio frequency driven microhollow cathode discharge.</u> APPLIED PHYSICS LETTERS, 93 (1). 011501. [Journal article]

Waveform optimisation for internal cardioversion of atrial fibrillation. Journal of Electrocardiology, 44 (6). pp. 689-693. [Journal article]