

Photostable second-harmonic generation from a single KTiOPO₄ nanocrystal for nonlinear microscopy

Surface science analysis and surface modification methods for biomaterials research

Analysis of biomaterial scaffold fiber thickness for assessing cell attachment

Composites of poly(L-lactide-co-caprolactone) and tricalcium phosphate containing antibiotics; Degradation and drug release

Effect of lactide monomer on the hydrolytic degradation and performance of melt processed poly(lactide-co-glycolide) 85L/15G

HA composites of segmented polyurethanes prepared with glutamine or ascorbic acid as chain extenders for bone tissue regeneration

Picosecond laser-induced polymerization of highly porous microscaffolds

Osteoconductive properties of poly(96L/4D-lactide)/beta-tricalcium phosphate in long term animal model

Focal Laser Ablation of Prostate Cancer
Numerical Simulation of Temperature and Damage Distribution

Hybrid nanoparticle design based on cationized gelatin and the polyanions dextran sulfate and chondroitin sulfate for ocular gene therapy

Effects of bioactive glass S53P4 or beta-tricalcium phosphate and bone morphogenetic protein-2 and bone morphogenetic protein-7 on osteogenic differentiation of human adipose stem cells

Osteogenic medium is superior to growth factors in differentiation of human adipose stem cells towards boneforming cells in 3D culture

Human adipose tissue extract induces angiogenesis and adipogenesis in vitro

Development of a new illumination procedure for photodynamic therapy of the abdominal cavity

Demonstration of increased lipid accumulation potential of stigeoclonium sp., Kütz. BUM11007 under nitrogen starved regime
A new source of lipids for biodiesel production

Halogen bonding versus hydrogen bonding in driving self-assembly and performance of light-responsive supramolecular polymers

Mathematical modelling of the action potential of human embryonic stem cell derived cardiomyocytes

Effect of sol-gel derived in situ silica on the morphology and mechanical behavior of natural rubber and acrylonitrile butadiene rubber blends

Hollow fibers of poly(lactide-co-glycolide) and poly(ϵ -caprolactone) blends for vascular tissue engineering applications

Roll-to-roll atomic layer deposition for flexible substrates

Wear resistance of nanoparticle coatings on paperboard

The sensitivity of random polymer brush-lamellar polystyrene-b-polymethylmethacrylate block copolymer systems to process conditions

Direct laser writing of microstructures for the growth guidance of human pluripotent stem cell derived neuronal cells

Three-dimensional growth matrix for human embryonic stem cell-derived neuronal cells

A 3D Alzheimer's disease culture model and the induction of P21-activated kinase mediated sensing in iPSC derived neurons

Structure and barrier properties of human embryonic stem cell-derived retinal pigment epithelial cells are affected by extracellular matrix protein coating

Osteointegration of PLGA implants with nanostructured or micro-sized β -TCP particles in a minipig model

Interstitial photodynamic therapy and glioblastoma
Light fractionation study on a preclinical model: Preliminary results

Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels

Effects of chitosan and bioactive glass modifications of knitted and rolled polylactide-based 96/4L/D scaffolds on chondrogenic differentiation of adipose stem cells

Rational design of a printable, highly conductive silicone-based electrically conductive adhesive for stretchable radio-frequency antennas

Enhancement of adhesion and promotion of osteogenic differentiation of human adipose stem cells by poled electroactive poly(vinylidene fluoride)

Multi-stable dynamics of the non-adiabatic repressilator

Biomimetic collagen I and IV double layer Langmuir-Schaefer films as microenvironment for human pluripotent stem cell derived retinal pigment epithelial cells

Comparison of three light doses in the photodynamic treatment of actinic keratosis using mathematical modeling

Dynamic piezoelectric stimulation enhances osteogenic differentiation of human adipose stem cells

Soft graphoepitaxy for large area directed self-assembly of polystyrene-block-poly(dimethylsiloxane) block copolymer on nanopatterned substrates fabricated by nanoimprint lithography

The influence of SrO and CaO in silicate and phosphate bioactive glasses on human gingival fibroblasts

Measuring optical anisotropy in poly(3,4-ethylene dioxythiophene)
poly(styrene sulfonate) films with added graphene

Bioactive glass ions as strong enhancers of osteogenic differentiation in human adipose stem cells

Sol-gel synthesis of quaternary $(P_2O_5)_{55}-(CaO)_{25}-(Na_2O)_{(20-x)}-(TiO_2)_x$ bioresorbable glasses for bone tissue engineering applications ($x = 0, 5, 10, \text{ or } 15$)

Surface Modified Biodegradable Electrospun Membranes as a Carrier for Human Embryonic Stem Cell-Derived Retinal Pigment Epithelial Cells

Strontium- and calcium-containing, titanium-stabilised phosphate-based glasses with prolonged degradation for orthopaedic tissue engineering

Polypyrrole coating on poly-(lactide/glycolide)- β -tricalcium phosphate screws enhances new bone formation in rabbits

Preparation and antimicrobial characterization of silver-containing packaging materials for meat

Compatibilization of natural rubber/nitrile rubber blends by sol-gel nano-silica generated by in situ method

Improved properties for packaging materials by nanoscale surface modification and ALD barrier coating

Uniform and electrically conductive biopolymer-doped polypyrrole coating for fibrous PLA

Human Adipose Stem Cells Differentiated on Braided Polylactide Scaffolds is a Potential Approach for Tendon Tissue Engineering

Wetting hysteresis induced by temperature changes
Supercooled water on hydrophobic surfaces

Effect of incorporation of CdS NPs on performance of PTB7
PCBM organic solar cells

Honeycomb porous films as permeable scaffold materials for human embryonic stem cell-derived retinal pigment epithelium

The influence of high-temperature sulfuric acid solution ageing on the properties of laminated vinyl-ester joints

Simulation of developing human neuronal cell networks

Increased survival rate by local release of diclofenac in a murine model of recurrent oral carcinoma

Biomaterials for Electronics

Aligned Poly(ϵ -caprolactone) Nanofibers Guide the Orientation and Migration of Human Pluripotent Stem Cell-Derived Neurons, Astrocytes, and Oligodendrocyte Precursor Cells In Vitro

Pipeline for effective denoising of digital mammography and digital breast tomosynthesis

Bioamine-crosslinked gellan gum hydrogel for neural tissue engineering

Lead field theory provides a powerful tool for designing microelectrode array impedance measurements for biological cell detection and observation

Influence of strain rate, temperature and fatigue on the radial compression behaviour of Norway spruce

The production of injectable hydrazone crosslinked gellan gum-hyaluronan-hydrogels with tunable mechanical and physical properties

The effect of equiaxial stretching on the osteogenic differentiation and mechanical properties of human adipose stem cells

Multi-material bio-printing facilities

Azopolymer photopatterning for directional control of angiogenesis

Bioactive glass induced osteogenic differentiation of human adipose stem cells is dependent on cell attachment mechanism and mitogen-activated protein kinases

Light propagation analysis in nervous tissue for wireless optogenetic nanonetworks

Non-intersecting leaf insertion algorithm for tree structure models

Uncertainty in multispectral lidar signals caused by incidence angle effects

Weighing trees with lasers
Advances, challenges and opportunities

Fluid flow simulations meet high-speed video
Computer vision comparison of droplet dynamics

Wound healing of human embryonic stem cell-derived retinal pigment epithelial cells is affected by maturation stage

A COMPARATIVE IN VITRO STUDY OF CELL GROWTH ON TEXTILE SCAFFOLDS FOR TISSUE ENGINEERING APPLICATIONS

Novel osteoconductive β -tricalcium phosphate/poly(L-lactide-co- ϵ -caprolactone) scaffold for bone regeneration a study in a rabbit calvarial defect

Cell response to round and star-shaped polylactide fibers

Gas-foamed poly(lactide-co-glycolide) and poly(lactide-co-glycolide) with bioactive glass fibres demonstrate insufficient bone repair in lapine osteochondral defects

Human Neural Tissues from Neural Stem Cells Using Conductive Biogel and Printed Polymer Microelectrode Arrays for 3D Electrical Stimulation

In-vitro dissolution characteristics and human adipose stem cell response to novel borophosphate glasses

Nano-structured optical fibers made of glass-ceramics, and phase separated and metallic particle-containing glasses

On the limit of superhydrophobicity
Defining the minimum amount of TiO_2 nanoparticle coating

Structure and Dynamics of Thermosensitive pDNA Polyplexes Studied by Time-Resolved Fluorescence Spectroscopy

Solvent Welding and Imprinting Cellulose Nanofiber Films Using Ionic Liquids

Noise measurements from reconstructed digital breast tomosynthesis

The Role of Temperature and Lipid Charge on Intake/Uptake of Cationic Gold Nanoparticles into Lipid Bilayers

An architectural understanding of natural sway frequencies in trees

3D Scaffolds of Polycaprolactone/Copper-Doped Bioactive Glass
Architecture Engineering with Additive Manufacturing and Cellular Assessments in a Coculture of Bone Marrow Stem Cells and Endothelial Cells

Characterisation and in vitro and in vivo evaluation of supercritical- CO_2 -foamed β -TCP/PLCL composites for bone applications

Bioactive glass ions for in vitro osteogenesis and microvascularization in gellan gum-collagen hydrogels

Effect of melt-derived bioactive glass particles on the properties of chitosan scaffolds

Miniature CoCr laser welds under cyclic shear
Fatigue evolution and crack growth

Transcription closed and open complex formation coordinate expression of genes with a shared promoter region

Backscattering-based wireless communication and power transfer to small biomedical implants

Co-culture of human induced pluripotent stem cell-derived retinal pigment epithelial cells and endothelial cells on double collagen-coated honeycomb films

Toward Rigorous Materials Production
New Approach Methodologies Have Extensive Potential to Improve Current Safety Assessment Practices

Cell adhesion and culture medium dependent changes in the high frequency mechanical vibration induced proliferation, osteogenesis, and intracellular organization of human adipose stem cells

Evaluation of scaffold microstructure and comparison of cell seeding methods using micro-computed tomography-based tools