Yang Zhang - DTU Orbit (17/02/2019)

Yang Zhang
Senior Researcher

Department of Mechanical Engineering

Manufacturing Engineering

Postal address:
Produktionstorvet
427, 323B
2800
Kgs. Lyngby
Denmark
Email: yazh@mek.dtu.dk
Phone: 45254892
Fax: 45254870
Web address: http://www.mek.dtu.dk
Web: http://www.mek.dtu.dk

Research outputs:

Experimental investigation and thermo-mechanical modelling for tool life evaluation of photopolymer additively manufactured mould inserts in different injection moulding conditions
Research output: Research - peer-review › Journal article – Annual report year: 2019

A method for the characterization of the reflectance of anisotropic functional surfaces
Research output: Research - peer-review › Journal article – Annual report year: 2018

A Soft Tooling Process Chain for Injection Molding of a 3D Component with Micro Pillars
Research output: Research - peer-review › Journal article – Annual report year: 2018

Assessment of sub-mm features replication capability in injection moulding using a multi-cavity tool produced by additive manufacturing
Research output: Research - peer-review › Poster – Annual report year: 2018

Assessment of sub-mm features replication capability in injection moulding using a multi-cavity tool produced by additive manufacturing
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

A study of laser surface modification of polymers: A comparison in air and water
Research output: Research - peer-review › Journal article – Annual report year: 2018

Comparison of selected processes for surface microstructuring of complex mould for an implanted device
Research output: Research - peer-review › Journal article – Annual report year: 2018

Dimensional Accuracy and Repeatability of 3D Printed Mould Inserts by DLP
Research output: Research - peer-review › Poster – Annual report year: 2018

Dimensional Accuracy and Repeatability of Mould Inserts Manufactured by Mask Projection Vat-Photopolymerization
Research output: Research - peer-review › Poster – Annual report year: 2018

Evaluation of an improved micro milling strategy for the generation of tool steel micro features with optical functionality
Research output: Research - peer-review › Paper – Annual report year: 2018

Evaluation of part consistency with photopolymer inserts in different injection moulding process parameters
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018
Evaluation of part consistency with photopolymer inserts in different injection moulding process parameters
Research output: Research - peer-review › Poster – Annual report year: 2018

Investigation of product and process fingerprints for fast quality assurance in injection molding of micro-structured components
Research output: Research - peer-review › Journal article – Annual report year: 2018

Modeling of nanosecond pulsed laser processing of polymers in air and water: Paper
Research output: Research - peer-review › Journal article – Annual report year: 2018

On the effect of machining strategy in micro milling of tool steel surface micro features with optical functionality
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Pitch measurements validation of a structural coloured steel insert using Scanning Confocal Microscopy (SCM) and Atomic Force Microscopy (AFM)
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Pitch measurements validation of steel inserts micro-grooves with light diffractive properties using a Laser Scanning Confocal Microscope (LSCM) and an Atomic Force Microscope (AFM)
Research output: Research - peer-review › Poster – Annual report year: 2018

A comparison of reflectance properties on polymer micro-structured functional surface
Research output: Research - peer-review › Poster – Annual report year: 2017

A preliminary study on replication and quality correlation of on-part and on-runner polymer injection moulded micro features
Research output: Research - peer-review › Poster – Annual report year: 2017

A Soft Tooling process chain employing Additive Manufacturing for injection molding of a 3D component with micro pillars
Research output: Research - peer-review › Journal article – Annual report year: 2017

A study on replication and quality correlation of on-part and on-runner polymer injection molded micro features
Research output: Research - peer-review › Poster – Annual report year: 2017

Evaluation of optical functional surfaces on the injection moulding insert by micro milling process
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Research output: Research - peer-review › Paper – Annual report year: 2017

Injection Moulding Pilot Production: Performance Assessment of Tooling Process Chains Based on Tool Inserts Made from Brass and A 3d Printed Photopolymer
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Investigation of Tooling for Anisotropic Optical Functional Surfaces
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Modeling the Anisotropic Reflectance of a Surface with Microstructure Engineered to Obtain Visible Contrast after Rotation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018
Process chain for fabrication of anisotropic optical functional surfaces on polymer components
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

The impact of tool wear on the functionality of replicated polymer surface with micro structures
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Tolerances in micro manufacturing
Research output: Research - peer-review › Paper – Annual report year: 2017

A computational model for heterogeneous heating during pulsed laser irradiation of polymers doped with light-absorbing microparticles
Research output: Research - peer-review › Journal article – Annual report year: 2016

Adaptive Layer Height During DLP Materials Processing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

A Self-Peeling Vat for Improved Release Capabilities During DLP Materials Processing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Improvement in Surface Characteristics of Polymers for Subsequent Electroless Plating Using Liquid Assisted Laser Processing
Research output: Research - peer-review › Conference article – Annual report year: 2016

Injection molding of micro pillars on vertical side walls using polyether-ether-ketone (PEEK)
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Two process chains for creating functional surfaces on mold for 3D geometry
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Application of Functional Nano-Patterning to Polymer Medical Micro Implants
Research output: Research - peer-review › Conference article – Annual report year: 2015

Comparison of 3 methods on fabricating micro-/nano-structured surface on 3D mold cavity
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Replication of Micro pillars by PEEK injection moulding with CrN coated Ni tool
Research output: Research - peer-review › Journal article – Annual report year: 2015

Replication of microstructures on three-dimensional geometries by injection moulding of liquid silicone rubber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Replication of micro structured surface by injection moulding of PEEK
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

An explanation of the mechanism for laser induced selective activation using diffusion theory
Research output: Research - peer-review › Journal article – Annual report year: 2013

Dimensional verification of high aspect micro structures using FIB-SEM
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Dimensional verification of high aspect ratio micro structures using FIB-SEM
Research output: Research › Poster – Annual report year: 2014
Verification of a characterization method of the laser-induced selective activation based on industrial lasers
Research output: Research - peer-review › Journal article – Annual report year: 2013

An Explanation of the Selective Plating of Laser Machined Surfaces using Surface Tension Components
Research output: Research - peer-review › Journal article – Annual report year: 2011

Selective metallization of polymers using laser induced surface activation (LISA)—characterization and optimization of porous surface topography
Research output: Research - peer-review › Journal article – Annual report year: 2011

Characterization of Laser Machined Polymer Surface Using Bearing Area Curve Parameters for Future Plating
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Electroless Plating on Plastic Induced by Selective Laser Activation
Research output: Research - peer-review › Conference article – Annual report year: 2010

Laser Induced Selective Activation For Subsequent Autocatalytic Electroless Plating
Research output: Research › Ph.D. thesis – Annual report year: 2010

Electroless Plating on Plastic Induced by Selective Laser Activation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

LASER INDUCED SELECTIVE ACTIVATION UTILIZING AUTO-CATALYTIC ELECTROLESS PLATING ON POLYMER SURFACE
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Laser induced selective activation utilizing auto-catalytic electroless plating on polymer surfaces
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2008

Projects:

End-of-Life-Tires Rubber Recycling and Powder Injection Moulding
Project: PhD

Integrating Micro and Nano structures on Steel Surfaces - Process Chain Implementation and Validation
Project: PhD

Process chains to manufacture micro structures on 3D surfaces by replication
Project: PhD

Process technologies for functional anisotropic surfaces generation in Quick Response Code applications
Project: PhD

Precision Injection Moulding of Micro Features using Integrated Process/Product Quality Assurance
Project: PhD

New production paradigms for wind turbines
Project: PhD
Laser Induce Selective Activation For Subsequent Autocatalytic Electroless Plating
Project: PhD

Micro Injection Moulding for Micro Fuel cells Production
Project: PhD

Activities:

Feasibility study on integrated process/product quality assurance framework for precision injection moulding based on vibration monitoring
Activity: Talks and presentations › Conference presentations

A preliminary study on replication and quality correlation of on-part and on-runner polymer injection moulded micro features
Activity: Talks and presentations › Conference presentations