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Program Book

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P4-035 Near-Infrared-Responsive Injectable Photothermal Hydrogel for Synergistic Photothermal Biomaterial Application
Hsi-Erh Chen, National Taiwan University, Chinese Taipei

P4-036 pH-induced self-polymerisation of tannic acid
Motaharesadat Hosseini, School of Mechanical, Medical and Process Engineering, Faculty of Engineering, Queensland University of Technology, Brisbane, QLD, Australia; ARC Industrial Transformation Training Centre for Multiscale 3D Imaging, Modelling and Manufacturing (M3D), Queensland University of Technology, Brisbane, QLD, Australia., Australia

P4-037 Enhancing Titanium Surface Functionality with Immobilized Hydrogel for Biomedical Engineering Applications
Ghazal Shineh, School of Biomedical Engineering, University of Sydney, Sydney, New South Wales 2006, Australia, Australia

P4-038 The Effect of Cobalt Ion on HIF-1a Activation of Pre-osteoblast
Hwaran Lee, Clemson University, USA

P4-039 Luminescent europium-containing nanocomposite double-network hydrogels for sensing applications
Pin-Han Zeng, Institute of Polymer Science and Engineering, National Taiwan University, Chinese Taipei

P4-040 Galvanic coupling of tin-silver alloy to 316L stainless steel at varying surface area ratios
Charley Goodwin, Clemson University, USA

P4-041 CoCrMo femoral knee retrievals show severe wear, electrocautery damage, and material transfer
Peter Kurtz, Clemson University, USA

P4-042 Fibroin-based film-forming gels for facial skin protection
Aphiradee Boonkham, Naresuan University, Thailand

P4-043 A digital twin for degradable Mg-implants
Regine Willumeit Roemer, Helmholtz Center Hereon, Institute for Metallic Biomaterials, Germany

P4-044 Significantly performance improvement of biodegradable Zn alloys by refining second phase through a novel technology
Zhang-Zhi Shi, University of Science and Technology Beijing, China

P4-045 Implantation of magnesium cylinders to influence pain in an *in vivo* rabbit model of osteoarthritis.
Nina Angrisani, Hannover Medical School, Germany

P4-046 Studying dynamic magnesium-based implant biodegradation using *in situ* synchrotron radiation-based tomography and transmission electron microscopy
Berit Zeller-Plumhoff, Helmholtz-Zentrum Hereon, Germany

P4-047 Corrosion behaviour of the TiNbTaSn titanium beta alloy
Jaroslav Fojt, University of chemistry and technology Prague, Czech Republic

P4-048 Semi-automated system for fabrication and optimization of customized hydrogel templates for tissue biomanufacturing
Deepak Choudhury, BTI A*STAR, Singapore, Singapore

P4-049 Additively manufactured and laser surface textured Ti-13Nb-13Zr for bone implant application
Annett Gebert, Leibniz IFW Dresden, Germany

P4-050 Co-assembling living material as an in vitro lung epithelial infection model
Yuanhao Wu, Wuhan Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, China

P4-051 Systematic oxide film degradation precedes titanium alloy corrosion
Michael Kurtz, Clemson University, USA

P4-052 Change in Mechanical Properties of β-type Ti-29Nb-13Ta-4.6Zr with various oxygen contents for Biomedical Applications
Takaaki Maruyama, Meijo University, Japan

P4-053 Electrochemical preparation of biomimetic coatings on biodegradable zinc alloy
Vojtech Hybasek, University of Chemistry and Technology, Prague, Czech Republic

P4-054 Mechanical and biological properties of an additively manufactured Ti-20Nb-6Ta implant material with open porous structure
Jan-Oliver Sass, Biomechanics and Implant Technology Research Laboratory, Department of Orthopedics, Rostock University Medical Center, Doberaner Straße 142, D-18057 Rostock, Germany, Germany

P4-055 Photocrosslinkable and biodegradable hydrogels for the controlled delivery of exosomes
Sergio Ayala-Mar, School of Engineering and Science, Tecnologico de Monterrey, Mexico

P4-056 Investigating the effect of thickener concentrations on the corrosion behaviour of Pure Mg
Manas Ranjan Sahu, National Institute of Materials Science, Japan

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Shazia Shaikh, Indian Institute of Technology Kanpur, India

P4-058 Spontaneous cellular assembly in artificial small diameter blood vessels produced using a novel extrusion-based 3D printing technique
Hyoryung Nam, POSTECH, Korea, Republic of

P4-059 Engineered hydrogel nerve guidance conduit with draw-spun high-aligned piezoelectric fibrous membrane.
Sung-Won Ko, Department of Bionanotechnology and Bioconvergence Engineering, Graduate School, Jeonbuk National University, Korea, Republic of

P4-060 Effect of fibrous hydrogels containg bioink on fabricating artificial skeletal muscle constructs
Kyoungryong Kim, SungKyunKwan University, Korea, Republic of

P4-061 Highly conductive transparent electrode with silver nanowire and graphene oxide for ubiquitous healthcare
DongChul Cho, Postech, Korea, Republic of

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MIN SEOK KANG, School of Chemical Engineering, Pusan National University, Korea, Republic of

P4-063 Development of multi-stepwise preset bioprinting technique for biomimicking microstructure of native tissue
Jae-Hun Kim, Tech University of Korea, Korea, Republic of

P4-064 Injectable electrospun nanofibrous hydrogels for angiogenesis of brain tissue following stroke
Ji Woo Lee, Department of Nano-Bioengineering, Incheon National University, Incheon, 22012, Korea, Republic of

P4-065 Development of electrospun fiber-based platforms for trabecular meshwork cell culture
MINJI KIM, Department of Nano-Bioengineering, Incheon National University, 119, Academy-ro, Yeonsu-gu, Incheon, 22012, Republic of Korea, Korea, Republic of

P4-066 Wearable and flexible glucose sensor based on heterostructure ZnO nanosheets decorated PU/Chitosan-PANI hybrid nano-fiber
Devendra Shrestha, Jeonbuk National University, Korea, Republic of

P4-067 $(CoNi)_2O_4$/fMWCNTs-hybrid nanocomposite based self-adhesive wearable non-enzymatic electrochemical sensor for continuous glucose monitoring in sweat
Devendra Shrestha, Jeonbuk National University, Korea, Republic of

P4-068 Hyper-oxygenerating of chloroplast in microcapsule composed of alginate-peptide conjugate for the xenogeneic pancreatic islet transplantation
Seonmi Jang, Hanyang University, Korea, Republic of

P4-069 Detachable microneedle for the treatment of diabetic foot ulcers
SuHyang Lee, Department of biomedical engineering, Chonnam National University, Korea, Republic of

P4-070 Drug delivery via pH-responsive core-shell structured microspheres-landen contact lens for dry eye treatment
SEUNG HEE PYEN, POSTECH, Korea, Republic of

P4-071 Anchoring effects of microneedle stent placement using interventional procedures
GeonA Kim, Department of biomedical engineering, Chonnam National University, Korea, Republic of

P4-072 Conductive microneedle electrodes for vital sign monitoring and brain treatment
Byeori Kim, Department of biomedical engineering, Chonnam National University, Korea, Republic of

P4-073 Development of collagen-based hemostatic microneedle patch incorporated with laponite
DoHun Kim, Department of biomedical engineering, Chonnam National University, Korea, Republic of

P4-074 3D Concave Electrode for Drug Evaluation of Parkinson's Disease Patient-derived Midbrain Organoids
Hyun Seo Kim, Department of Chemical and Biomolecular Engineering, Sogang University, Korea, Republic of

P4-075 Development of Cardiac Chamber-Shaped 4D-Printed Structure Mimicking Myocardial Fiber Orientation Using Magnetic Polarity Patterning
Hwanyong Choi, Postech, Korea, Republic of