

# Contents

About the Special Issue Editor	ix
<b>Manoj Gupta</b>	
Metal Matrix Composites	
Reprinted from: <i>Metals</i> 2018, 8, 379, doi: 10.3390/met8060379	1
<b>Abolfazl Azarniya, Mir Saman Safavi, Saeed Sovizi, Amir Azarniya, Biao Chen, Hamid Reza Madaah Hosseini and Seeram Ramakrishna</b>	
Metallurgical Challenges in Carbon Nanotube-Reinforced Metal Matrix Nanocomposites	
Reprinted from: <i>Metals</i> 2017, 7, 384, doi: 10.3390/met7100384	3
<b>Khin Sandar Tun, Yuming Zhang, Gururaj Parande, Vyasaraj Manakari and Manoj Gupta</b>	
Enhancing the Hardness and Compressive Response of Magnesium Using Complex Composition Alloy Reinforcement	
Reprinted from: <i>Metals</i> 2018, 8, 276, doi: 10.3390/met8040276	47
<b>Weidong Song, Liansong Dai, Lijun Xiao, Cheng Wang, Xiaonan Mao and Huiping Tang</b>	
A Meso-Mechanical Constitutive Model of Particle-Reinforced Titanium Matrix Composites at High Temperatures	
Reprinted from: <i>Metals</i> 2017, 7, 15, doi: 10.3390/met7010015	57
<b>Feng Qiu, Xiang Gao, Jian Tang, Yu-Yang Gao, Shi-Li Shu, Xue Han, Qiang Li and Qi-Chuan Jiang</b>	
Microstructures and Tensile Properties of Al-Cu Matrix Composites Reinforced with Nano-Sized SiC <sub>p</sub> Fabricated by Semisolid Stirring Process	
Reprinted from: <i>Metals</i> 2017, 7, 49, doi: 10.3390/met7020049	69
<b>Amit Kumar, Khin Sandar Tun, Amit Devendra Kohadkar and Manoj Gupta</b>	
Improved Compressive, Damping and Coefficient of Thermal Expansion Response of Mg-3Al-2.5La Alloy Using Y <sub>2</sub> O <sub>3</sub> Nano Reinforcement	
Reprinted from: <i>Metals</i> 2017, 7, 104, doi: 10.3390/met7030104	77
<b>Nguyen Thi Hoang Oanh, Nguyen Hoang Viet, Ji-Soon Kim and Alberto Moreira Jorge Junior</b>	
Characterization of In-Situ Cu-TiH <sub>2</sub> -C and Cu-Ti-C Nanocomposites Produced by Mechanical Milling and Spark Plasma Sintering	
Reprinted from: <i>Metals</i> 2017, 7, 117, doi: 10.3390/met7040117	88
<b>Ahmed Nassef, Waleed H. El-Garaihy and Medhat El-Hadek</b>	
Characteristics of Cold and Hot Pressed Iron Aluminum Powder Metallurgical Alloys	
Reprinted from: <i>Metals</i> 2017, 7, 170, doi: 10.3390/met7050170	100
<b>Ahmed Nassef, Waleed H. El-Garaihy and Medhat El-Hadek</b>	
Mechanical and Corrosion Behavior of Al-Zn-Cr Family Alloys	
Reprinted from: <i>Metals</i> 2017, 7, 171, doi: 10.3390/met7050171	112
<b>Hyun Min Nam, Duck Min Seo, Hyung Duk Yun, Gurunathan Thangavel, Lee Soon Park and Su Yong Nam</b>	
Transparent Conducting Film Fabricated by Metal Mesh Method with Ag and Cu@Ag Mixture Nanoparticle Pastes	
Reprinted from: <i>Metals</i> 2017, 7, 176, doi: 10.3390/met7050176	124

**Linhui Zhang, Yan Jiang, Qianfeng Fang, Rui Liu, Zhuoming Xie, Tao Zhang, Xianping Wang and Changsong Liu**  
Comparative Investigation of Tungsten Fibre Nets Reinforced Tungsten Composite Fabricated by Three Different Methods  
Reprinted from: *Metals* **2017**, 7, 249, doi: 10.3390/met7070249 . . . . . 132

**Sónia Simões, Filomena Viana, Marcos A. L. Reis and Manuel F. Vieira**  
Aluminum and Nickel Matrix Composites Reinforced by CNTs: Dispersion/Mixture by Ultrasonication  
Reprinted from: *Metals* **2017**, 7, 279, doi: 10.3390/met7070279 . . . . . 144

**Milli Suchita Kujur, Ashis Mallick, Vyasaraj Manakari, Gururaj Parande, Khin Sandar Tun and Manoj Gupta**  
Significantly Enhancing the Ignition/Compression/Damping Response of Monolithic Magnesium by Addition of  $\text{Sm}_2\text{O}_3$  Nanoparticles  
Reprinted from: *Metals* **2017**, 7, 357, doi: 10.3390/met7090357 . . . . . 155

**Hajo Dieringa, Lydia Katsarou, Ricardo Buzolin, Gábor Szakács, Manfred Horstmann, Martin Wolff, Chamini Mendis, Sergey Vorozhtsov and David StJohn**  
Ultrasound Assisted Casting of an AM60 Based Metal Matrix Nanocomposite, Its Properties, and Recyclability  
Reprinted from: *Metals* **2017**, 7, 388, doi: 10.3390/met7100388 . . . . . 172

**Cristina Arévalo, Isabel Montealegre-Melendez, Eva M. Pérez-Soriano, Enrique Ariza, Michael Kitzmantel and Erich Neubauer**  
Study of the Influence of TiB Content and Temperature in the Properties of In Situ Titanium Matrix Composites  
Reprinted from: *Metals* **2017**, 7, 457, doi: 10.3390/met7110457 . . . . . 185

**Youhong Sun, Chi Zhang, Baochang Liu, Qingnan Meng, Shaoming Ma and Wenhao Dai**  
Reduced Graphene Oxide Reinforced 7075 Al Matrix Composites: Powder Synthesis and Mechanical Properties  
Reprinted from: *Metals* **2017**, 7, 499, doi: 10.3390/met7110499 . . . . . 198

**Abdollah Saboori, Seyed Kiomars Moheimani, Matteo Pavese, Claudio Badini and Paolo Fino**  
New Nanocomposite Materials with Improved Mechanical Strength and Tailored Coefficient of Thermal Expansion for Electro-Packaging Applications  
Reprinted from: *Metals* **2017**, 7, 536, doi: 10.3390/met7120536 . . . . . 212

**Suqing Zhang, Tijun Chen, Jixue Zhou, Dapeng Xiu, Tao Li and Kaiming Cheng**  
Mechanical Properties of Thixoforged In Situ  $\text{Mg}_2\text{Si}_p/\text{AM60B}$  Composite at Elevated Temperatures  
Reprinted from: *Metals* **2018**, 8, 106, doi: 10.3390/met8020106 . . . . . 226

**Josef Zapletal, Zuzanka Trojanová, Pavel Dolevolumezal, Stanislava Fintová and Michal Knapek**  
Elastic and Plastic Behavior of the QE22 Magnesium Alloy Reinforced with Short Saffil Fibers and SiC Particles  
Reprinted from: *Metals* **2018**, 8, 133, doi: 10.3390/met8020133 . . . . . 239

**Sravva Tekumalla, Najib Farhan, Tirumalai S. Srivatsan and Manoj Gupta**  
Nano-ZnO Particles' Effect in Improving the Mechanical Response of Mg-3Al-0.4Ce Alloy  
Reprinted from: *Metals* **2016**, 6, 276, doi: 10.3390/met6110276 . . . . . 252

**Gururaj Parande, Vyasaraj Manakari, Harshit Gupta and Manoj Gupta**  
Magnesium- $\beta$ -Tricalcium Phosphate Composites as a Potential Orthopedic Implant: A Mechanical/Damping/Immersion Perspective  
Reprinted from: *Metals* **2018**, 8, 343, doi: 10.3390/met8050343 . . . . . 263