

# **Vamsi Krishna Balla, Ph.D., Chief Scientist, BCCD**

## **Publications:**

### **Chapters in Books/Book Series**

1. Mitun Das, **Vamsi Krishna Balla**, Additive Manufacturing of Titanium and its alloys, Springer Handbook of Additive Manufacturing, Ed.: Christoph Klahn, Dongdong Gu, Mario Monzon, Tao Sun, Alain Bernard and Eujin Pei, Springer, 2021.
2. **Vamsi Krishna Balla**, Subhadip Bodhak, Pradyot Datta, Biswanath Kundu, Mitun Das, Amit Bandyopadhyay, Susmita Bose, Biointegration of 3D Printed Biomaterials and Biomedical Devices, In Biointegration of medical implant materials (2nd edition), Ed: Chandra P Sharma, Elsevier UK, Chapter 16, (2020) 433-482. [Online Access](#)
3. **Vamsi Krishna Balla**, Chapter 5: *Deposition based and solid-state additive manufacturing technologies for metals*, in Additive Manufacturing, Second Edition (2020) 147-182 Eds. Amit Bandyopadhyay, Susmita Bose, CRC Press, Taylor & Francis Group. [Online Access](#)
4. Mitun Das, **Vamsi Krishna Balla**, Chapter 12: *Additive Manufacturing in Materials Innovation*, Second Edition (2020) 377-420, Eds. Amit Bandyopadhyay, Susmita Bose, CRC Press, Taylor & Francis Group. [Online Access](#)
5. **Vamsi Krishna Balla**, Chapter 3: Deposition based and solid-state additive manufacturing technologies for metals, in Additive Manufacturing, 65-95 (2015) Eds. Amit Bandyopadhyay, Susmita Bose, CRC Press, Taylor & Francis Group, Boca Raton, FL, USA. (ISBN: 9781482223590). [Online Access](#)
6. Mitun Das, **Vamsi Krishna Balla**, Chapter 11: Additive Manufacturing and Innovation in Materials World, in Additive Manufacturing, 295-330 (2015) Eds. Amit Bandyopadhyay, Susmita Bose, CRC Press, Taylor & Francis Group, Boca Raton, FL, USA. (ISBN: 9781482223590) [Times cited: 01]. [Online Access](#)
7. **Vamsi Krishna Balla**, Mitun Das, Someswar Datta, Biswanath Kundu, Chapter 9: Articulating biomaterials: Surface engineering, tribology and biocompatibility, in *Processing Techniques and Tribological Behavior of Composite Materials*, 218-267 (2015) Eds. Rajnesh Tyagi and J. P. Davim, IGI Global, Hershey, USA. [Times cited: 01] [Online Access](#)
8. Amit Bandyopadhyay, Solaiman Tarafder, **Vamsi Krishna Balla** and Susmita Bose, Laser Processed Tantalum for Implants, *Ceramic Transactions*, 237 (2012)123-129, “Biomaterials Science – Processing, Properties and Applications”, Eds. Roger Narayan, Susmita Bose and Amit Bandyopadhyay, American Ceramic Society. [Online Access](#)
9. Amit Bandyopadhyay, **Vamsi Krishna Balla**, Sheldon A Bernard and Susmita Bose, Chapter 5: Micro-Layered Manufacturing, in *Micro-Manufacturing: Design and Manufacturing of Micro-Products*, pp. 97-158 (2011), Edited by Muammer Koc and Tugrul Ozel, John Wiley and Sons, Inc. [Online Access](#)
10. **Vamsi Krishna Balla**, Susmita Bose and Amit Bandyopadhyay, Hard and Wear Resistant Surfaces for Load Bearing Metal Implants, *Ceramic Transactions*, Volume 228 (2011) 109-124, “Biomaterials Science – Processing, Properties and Applications”, Eds. Amit Bandyopadhyay, Susmita Bose and Roger Narayan, American Ceramic Society. [Online Access](#)

## Refereed Journals

### 2021-2022

1. Kaushita Banerjee, Moumita Debroy, **Vamsi Krishna Balla**, Subhadip Bodhak, Recent Progress in 3D printed Polyaryletherketone (PAEK) Based High Performance Polymeric Implants for Musculoskeletal Reconstructions, *Journal of Materials Research*, In press (2021) [Impact factor: 2.502; Times cited:]. [Online Access](#)
2. Anuradha Jana, Sourav Dutta, Mangal Roy, Aravind U, Mitun Das, **Vamsi K Balla**, Microstructure, mechanical, in vitro corrosion and biocompatibility response study of Mg–5Zn–0.5Zr alloy, *MRS Advances*, In press (2021) [Impact factor: \*\*\*\*\*; Times cited:]. [Online Access](#)
3. Pradyot Datta, **Vamsi K. Balla**, Ceramics processing by additive manufacturing: A review, *Transactions of the Indian National Academy of Engineering*, In press (2021) [Impact factor: \*\*\*\*\*; Times cited:]. [Online Access](#)
4. Paramjot Singh, **Vamsi K. Balla**, Azim Gokce, Sundar V. Atre, Kunal H. Kate, Additive Manufacturing of Ti-6Al-4V alloy by Metal Fused Filament Fabrication (MF3): producing parts comparable to that of metal injection molding, *Progress in Additive Manufacturing*, In press (2021) [Impact factor: \*\*\*\*\*; Times cited:]. [Online Access](#)
5. Jogi Ganesh Dattatreya Tadimeti, Rajeeva Thilakarathne, **Vamsi Krishna Balla**, Kunal H Kate, Jagannadh Satyavolu, A two-stage C5 selective hydrolysis on soybean hulls for xylose separation and value added cellulose applications, *Biomass Conversion and Biorefinery*, In press (2021) [Impact factor: 2.602; Times cited:]. [Online Access](#)
6. Monideepa Mukherjee, Jaydeb Kundu, **Vamsi Krishna Balla**, Mitun Das, K. Sai Babu, G. V. Murali Krishna, Mahadev Shome, Microstructure and Properties of Parts Manufactured by Laser Metal Deposition of Customized Water Atomized Low Alloy Steel Powders, *Materials Science and Engineering A*, 814 (2021) 141232 [Impact factor: 4.652; Times cited:]. [Online Access](#)
7. Uzwalkiran.R, Srikanth Bontha, Ramesh M. R, **Vamsi Krishna Balla**, Srinivasan A, Tailoring surface characteristics of bioabsorbable Mg-Zn-Dy alloy using friction stir processing for improved wettability and degradation behavior, *Journal of Materials Research and Technology*, 12 (2021) 1530-1542 [Impact factor: 5.289; Times cited:]. [Online Access](#)
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9. Chinmayee Nayak, Ariharan S, Biswanath Kundu, **Vamsi Krishna Balla**, Kantesh Balani, Radiation-Induced Effects on Micro-Scratch of Ultra High Molecular Weight Polyethylene based nanocomposites, *Journal of Materials Research and Technology*, 11 (2021) 2277-2293 [Impact factor: 5.289; Times cited:]. [Online Access](#)
10. A. Mahato, M. De, P. Bhattacharjee, V. Kumar, P. Mukherjee, G. Singh, B. Kundu, **V.K. Balla**, S.K. Nandi, Role of calcium phosphate and bioactive glass coating on in vivo bone healing of new Mg-Zn-Ca implant, *Journal of Materials Science: Materials in Medicine*, 32 (2021) 55 [Impact factor: 2.489; Times cited:]. [Online Access](#)

11. Akrity Anand, Mitun Das, Biswanath Kundu, **Vamsi Krishna Balla**, Subhadip Bodhak, S. Gangadharan, Tribocorrosion characteristics of Ti6Al4V-TiB-TiN in-situ composite coatings prepared using plasma spraying, *The Journal of Composite Materials*, 55 (14) (2021) 1935-1946 [Impact factor: 1.972; Times cited:]. [Online Access](#)
12. **Vamsi Krishna Balla**, Jogi Ganesh Dattatreya Tadimetri, Kavish Sudan, Jagannadh Satyavolu, Kunal H Kate, First report on fabrication and characterization of soybean hull fiber: polymer composite filaments for fused filament fabrication, *Progress in Additive Manufacturing*, 6 (2021) 39-52 [Impact factor: \*\*\*\*; Times cited:]. [Online Access](#)
13. Itishree Ratha, Pradyot Datta, **Vamsi K Balla**, Biswanath Kundu, Samit K Nandi, Effect of doping in hydroxyapatite as coating material on biomedical implants by plasma spraying method: A review, *Ceramics International*, 47 (4) (2021) 4426-4445 [Impact factor: 3.830; Times cited:]. [Online Access](#)

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19. Somoshree Sengupta, Chandra Khatua, Aniruddha Pal, Subhadip Bodhak, **Vamsi Krishna Balla**, Influence of ultrasound and magnetic field treatment time on carcinoma cell inhibition: an in vitro study, *Ultrasound in Medicine & Biology*, 46 (10) (2020) 2752-2764 [Impact factor: 2.205; Times cited:] [Online Access](#)
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- applications, *Journal of the Mechanical Behavior of Biomedical Materials*, 108 (2020) 103830 [Impact factor: 3.485; Times cited:]. [Online Access](#)
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