VARUN **A B**AHETI, DST Inspire Faculty *since May'18*, Metallurgical & Materials Engineering, IIT Kharagpur, 721302, India. Phone: +91–3222–281713; Email: varun@metal.iitkgp.ac.in

ACADEMIC DETAILS

Indian Institute of Science, Bangalore

ME, Materials Engineering	CGPA: 7.1/8	2010–2012
PhD, Materials Engineering		2012–2017
Research Associate, Materials Engineering		July'2017 – April'2018

Malaviya National Institute of Technology, Jaipur

B.Tech, Metallurgical and Materials Engineering	CGPA: 9.23/10	2006–2010

HONORS & AWARDS

Inspire Faculty Award	DST, India	2018–2023
James Clerk Maxwell Prize	Philosophical Magazine (2nd runner-up)	2017
Best Presentation Award	Talk in Conference, London, UK	2017
IISc Fellowship	Research grant	2017–2018
MHRD Scholarship, India	ME, IISc Bangalore, India	2010–2012

PUBLICATIONS

1. **V.A. Baheti** and A. Paul, Development of different methods and their efficiencies for the estimation of diffusion coefficients following the diffusion couple technique, *Acta Materialia* xxx (2018) yyy-zzz. doi
2. **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, Solid–state diffusion–controlled growth of the phases in the Au–Sn system, *Philosophical Magazine* 98(1) (2018) 20-36. doi
3. **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, Bifurcation of the Kirkendall marker plane and the role of Ni and other impurities on the growth of Kirkendall voids in the Cu–Sn system, *Acta Materialia* 131 (2017) 260-270. doi
4. **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, Effect of Ni on growth kinetics, microstructural evolution and crystal structure in the Cu(Ni)–Sn system, *Philosophical Magazine* 97(21) (2017) 1782-1802. ***James Clerk Maxwell Prize Winner (second runner-up), 2017*** doi
5. **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, Solid–state diffusion–controlled growth of the intermediate phases from room temperature to an elevated temperature in the Cu–Sn and the Ni–Sn systems, *Journal of Alloys and Compounds* 727 (2017) 832-840. doi
6. **V.A. Baheti**, P. Kumar and A. Paul, Effect of Au, Pd and Pt addition in Cu on the growth of intermetallic compounds and the Kirkendall voids in the Cu–Sn system, *Journal of Materials Science: Materials in Electronics* 28(22) (2017) 17014-17019. doi
7. **V.A. Baheti**, P. Kumar and A. Paul, Growth of phases in the solid–state from room temperature to an elevated temperature in the Pd–Sn and the Pt–Sn systems, *Journal of Materials Science: Materials in Electronics* 28(24) (2017) 18379–18386. doi
8. **V.A. Baheti**, S. Islam, P. Kumar, R. Ravi, R. Narayanan, H. Dong, V. Vuorinen, T. Laurila and A. Paul, Effect of Ni content on the diffusion–controlled growth of the product phases in the Cu(Ni)–Sn system, *Philosophical Magazine* 96(1) (2016) 15-30. doi

9. **V.A. Baheti**, S. Santra, S. Roy, K. Perumalsamy, S. Prasad, R. Ravi and A. Paul, Phase evolutions, growth kinetics and diffusion parameters in the Co–Ni–Ta system, *Journal of Alloys and Compounds* 622 (2015) 1033-1040. doi

10. **V.A. Baheti**, R. Ravi and A. Paul, Interdiffusion study in the Pd–Pt system, *Journal of Materials Science: Materials in Electronics* 24(8) (2013) 2833-2838. doi

11. **V.A. Baheti**, S. Roy, R. Ravi and A. Paul, Interdiffusion and the phase boundary compositions in the Co–Ta system, *Intermetallics* 33 (2013) 87-91. doi

RESEARCH EXPERIENCE

Indian Institute of Science Bangalore, India
PhD Dissertation: 2012–2017 (Supervised by Prof. Aloke Paul and Dr. Praveen Kumar)
Diffusion–controlled growth of phases in metal–tin systems related to microelectronics packaging
ME Dissertation: 2011–2012 (Supervised by Dr. Raju Ravi and Prof. Aloke Paul)
Interdiffusion studies in binary Co–Ta and ternary Co(Ni)–Ta, Co(Ni)–Nb and Fe(Ni)–Nb systems

Malaviya National Institute of Technology, Jaipur
B.Tech Dissertation: 2009–2010 (Guided by Dr. Rajendra K Duchaniya and Prof. Ashok Sharma)
Synthesis and Characterization of Electroless Ni–P Coating on Aluminium Substrate and codeposition of Silicon Carbide (SiC) particles

TEACHING & ADVISING

Teaching Assistant, IISc Bangalore, Oxidation behaviour of Nickel	2014–2016
Teaching Assistant, IISc Bangalore, Mechanical Behaviour	2014

CONFERENCES

1. Investigation of the Growth Kinetics of Phases in Ni–Sn System, **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, *19th International Conference on Electronic Packaging, Systems, and Technology, London, United Kingdom, 2017 (Talk)* ***Best Presentation Award***
2. Bifurcation of the Kirkendall marker plane and the role of impurities on the growth of Kirkendall voids in the Cu–Sn system, **V.A. Baheti**, S. Kashyap, P. Kumar, K. Chattopadhyay and A. Paul, *30th Annual Students' symposium, Dept. of Materials Engg., IISc, 2017 (Talk)*
3. Effect of Ni content on the diffusion-controlled growth of the product phases in the Cu(Ni)–Sn system, **V.A. Baheti**, P. Kumar and A. Paul, *NMD–ATM Conference, IIT Kanpur, 2016 (Talk)*
4. Effect of Ni content on the diffusion-controlled growth of the product phases in the Cu(Ni)–Sn system, **V.A. Baheti**, S. Islam, P. Kumar, R. Ravi, R. Narayanan, H. Dong, V. Vuorinen, T. Laurila and A. Paul, *29th Annual Students' symposium, Dept. of Materials Engg., IISc, 2016 (Talk)*
5. Growth kinetics of phases in Cu–Sn and Ni–Sn systems, **V.A. Baheti**, P. Kumar and A. Paul, *28th Annual Students' symposium, Dept. of Materials Engg., IISc, 2015 (Talk)*

SKILL

Technical: EPMA, SEM, Ovens, Furnaces, Vacuum Equipments, Optical Microscope, XRD, FIB, TEM analysis
Software: Digital Micrograph, JEMS, Origin, ImageJ, MIPAR image analysis

REFERENCES

Dept. of Materials Engineering, Indian Institute of Science Bangalore, India

1. **Prof. Aloke Paul**, aloke@iisc.ac.in
2. **Prof. Kamanio Chattopadhyay**, kamanio@iisc.ac.in
3. **Dr. Praveen Kumar**, praveenk@iisc.ac.in