

List of Publications

Journal Publications:

- [1] D. Mandal, S.C. Panigrahi, and **S.K. Chaudhury**, “Microstructure and physical properties of steel wool fiber reinforced Aluminum based composites”, communicated to Canadian Metallurgical Quarterly, Springer publication, 2019 (under review).
- [2] M.C. Mehta, D. Mandal, and **S.K. Chaudhury**, “Microstructural Changes and Quality Improvement of Al7Si0.2Mg (356) Alloy by Die Vibration”, 2020, International Journal of Metal Casting, Springer publication, <https://doi.org/10.1007/s40962-020-00408-3>.
- [3] M.C. Mehta, D. Mandal, and **S.K. Chaudhury**, “Effects of Amplitude of Die Vibration on Cast Structure of Al4.5Cu Alloy”, International Journal of Metal Casting, 2019, Vol. 13, Issue 2, p. 438-449, Springer publication.
- [4] P. Patel, M. Mohanan, V. Sarvaiya, V. Acharya, D.K. Basa, and **S.K. Chaudhury**, “Design, Fabrication of Equal Channel Angular Extrusion Process and its Effect on Microstructure and Hardness of Al and Cu Alloys, Transactions of Indian Institute of Metals, Vol. 71, Issue 10, 2018, p. 2605-2614, Springer International Publishing.
- [5] C.V. Sharma, J.R. Trivedi, **S.K. Chaudhury**, “On increasing Mn recovery during production of Mn-based stainless steel”, Transactions of Indian Institute of Metals, Springer International Publishing, Vol. 70, Issue 10, Dec. 2017, p. 2651-2660.
- [6] **S.K. Chaudhury** and D. Apelian, “Effects of Mg and Cu content on quench sensitivity of Al-Si-Mg Alloy”, International Journal of Metalcasting”, Springer International Publishing, USA, 2016, 10(2), p.361-369.
- [7] **S.K. Chaudhury**, D. Apelian, P. Meyer, D. Massinon & J. Morichon, “Fatigue performance of fluidized bed heat-treated B319 alloy diesel cylinder heads”, Metallurgical Transactions A, 2015, 46(7), p. 3015-3027.
- [8] **S.K. Chaudhury**, D. Apelian, P. Meyer, D. Massinon & J. Morichon, “Microstructure and mechanical properties of heat-treated B319 alloy diesel cylinder heads”, Metallurgical Transactions A, 2015, 46(7), p. 3276-3286.
- [9] **S.K. Chaudhury**, V. Warke, S. Shankar, and D. Apelian, “Localized recrystallization in cast Al-Si-Mg alloy during solution heat treatment: dilatometric and calorimetric Studies”, Metallurgical and Materials Transactions A, 2011, Vol. 42, Issue 10, 3160-3169.
- [10] **S.K. Chaudhury** and S.C. Panigrahi, “Role of processing parameters on microstructural evolution of spray formed Al-2Mg alloy and Al-2Mg-TiO₂ composites”, Journal of Materials Processing and Technology, 2007, 182/1-3, p. 343-351.
- [11] **S.K. Chaudhury** and D. Apelian, Fluidized bed: An energy-efficient technology to heat treat Aluminum components, Heat Treating Progress, 2007, March, p. 12-13.
- [12] **S.K. Chaudhury** and S.C. Panigrahi, “Influence of TiO₂ particles on recrystallization kinetics of Al-2Mg-TiO₂ Composites”, Journal of Materials Processing and Technology, 2007, 182/1-3, p. 540-548.
- [13] **S.K. Chaudhury** and D. Apelian, “Fluidized bed heat treatment of cast Al-Si-Mg-Cu alloys”, Metallurgical and Materials Transactions A, vol. 37A, 2006, p. 2295-2313.
- [14] **S.K. Chaudhury** and D. Apelian, “Effect of rapid heating on solutionizing characteristics of Al-Si-Mg alloy using a Fluidized bed”, Metallurgical and Materials Transaction A, 37A, March 2006, p. 763-778.
- [15] **S.K. Chaudhury** and D. Apelian, “Effect of rapid heating on aging characteristics of T6 tempered Al-Si-Mg alloy using a Fluidized bed”, Journal of Materials Science, 2006, 41, p. 4684-4690.
- [16] **S.K. Chaudhury** and D. Apelian, “Effects of fluidized bed quenching on heat treating characteristics of cast Al-Si-Mg and Al-Si-Mg-Cu alloys”, International Journal of Cast Metals Research, 2006, 19(6), p. 361-369.
- [17] L.A. Bracamonte, J.C Withers, R.N. Katz, and **S.K. Chaudhury**, “Hybrid ceramic matrix / Metal matrix composites for gun barrels”, Materials and Manufacturing Processes, 21, 2006, p. 1-5.
- [18] **S.K. Chaudhury**, A.K. Singh, C.S. Sivaramkrishnan and S.C. Panigrahi, “Wear and friction behaviour of spray formed and stir cast Al-2Mg-11TiO₂ composites”, Wear, 2005, 258(5-6), p. 759-767.

- [19] **S.K. Chaudhury** and D. Apelian, "Effects of solution heat treatment on microstructure and mechanical properties of Al-Si-Cu-Mg (354) alloy using a fluidized bed reactor", AFS Transactions, 113, 2005, 05-071, p. 1-14.
- [20] **S.K. Chaudhury**, C.S. Sivaramakrishnan, and S.C. Panigrahi, "Effect of processing parameters on physical properties of spray formed and stir cast Al-2Mg-TiO₂ composites", Materials Science and Engineering A, 2005, 393(1-2), p. 196-203.
- [21] D. Apelian and **S.K. Chaudhury**, "Fluidized bed heat treatment of aluminum cast components", Journal De Physique IV, December 2004, 120, p. 555-562. [4]
- [22] **S.K. Chaudhury**, C.S. Sivaramakrishnan and S.C. Panigrahi, "A new spray forming technique for the preparation of Aluminium-rutile (TiO₂) exsitu particle composite", J. of Mat. Proc. and Tech, 1 Feb, 2004, 145/3, p. 385-390.
- [23] **S.K. Chaudhury**, A.K. Singh, C.S. Sivaramakrishnan, and S.C. Panigrahi, "Tensile and fracture behaviour of spray formed and stir cast Al-2Mg-TiO₂ composites" Materials Science and Engineering A, 15 June, 2004, 374(1-2), p. 184-190.
- [24] **S.K. Chaudhury**, A.K. Singh, C.S. Sivaramakrishnan and S.C. Panigrahi, "Preparation and thermo mechanical properties of stir cast Al-2Mg-11TiO₂ composite", Bulletin of Materials Science, 2004, December, 27(6), p. 517-521.
- [25] **S.K. Chaudhury**, L. Wang, and D. Apelian, "Fluidized Bed Reactor Heat Treatment of A356 Alloy: Microstructure Analysis and Mechanical Properties", AFS Transactions, 112, 2004, 04-055, p. 1-16.
- [26] A.K. Ray, K. Venkateswarlu, **S.K. Chaudhury**, S. Das, R. Kumar, and L.C. Pathak, "Fabrication of TiN reinforced aluminium metal matrix composites through a powder metallurgical route", J. of Mat. Sc. and Eng. A, 15 December, 2002, 338(1-2), p. 160-165.

Conference Publications:

- [27] S. Patel, B. Ganguli, and **S.K. Chaudhury**, Preliminary Investigation into Active Screen Plasma Nitriding of Austenitic Stainless Steel 347 H, The International Conference on Recent Advances in Metallurgy for Sustainable Development, 1st-3rd Feb., 2018, MS University, Vadodara, Gujarat, India.
- [28] G. Pandya, A. Rajodiya, V. Ramani, D.K. Basa, **S.K. Chaudhury**, "Evaluation of Coastal Sea Beach Sands of Gujarat and Kutch Bentonites for Foundry Applications", in proceedings of 66th Indian Foundry Congress, Gandhinagar, Gujarat, India, 10-12th January, 2018.
- [29] **N. Dave**, T. Suresh, R. Kannan, and **S.K. Chaudhury**, "Analysis and Prevention of Rust Issue in Automobile Industry", Proceedings of National Conference on Innovation In Mechanical Automobile, Civil Engineering & Materials Technology, 13th Feb., 2016, Indus University, Ahmedabad, India.
- [30] S.K. Qureshi, **S.K. Chaudhury**, and M. A. Mistry, "Recovery of Iron from the Mill Scale via Aluminothermic Reduction Process", in proceedings of 2nd National Conference on Emerging Trends in Engineering, Technology & Management, 30-31st Jan, 2015, Indus University, Rancharda, Ahmedabad, Gujarat, India.
- [31] C.V. Sharma, J.R. Trivedi, **S.K. Chaudhury**, "Effect of Slag Basicity and V-Ratio on Mn Recovery in Stainless Steel Production", in proceedings of 2nd National Conference on Emerging Trends in Engineering, Technology & Management, 30-31st Jan, 2015, Indus University, Rancharda, Ahmedabad, Gujarat, India.
- [32] D. Mahadevia, V. Rajnikant, S. Ghosh Chowdhury, and **S.K. Chaudhury**, "Characterisation of X60 microalloy Steel Using Tint Etching", in proceedings of 2nd National Conference on Emerging Trends in Engineering, Technology & Management, 30-31st Jan, 2015, Indus University, Rancharda, Ahmedabad, Gujarat, India, (ISBN no. 978-93-80867-75-5), Awarded best paper presentation award at the conference.
- [33] **J. K. Gandhi**, D.K. Basa, and **S.K. Chaudhury**, "Synthesis of LECA (Light Expanded Clay Aggregate) using red clay and fly ash", in proceedings of International Conference on Metallurgical and Materials Processes, Products, and Applications, 8-10 January, 2014, OPJIT, Raigarh, Chattisgarh, India
- [34] **J.K. Gandhi** and **S.K. Chaudhury**, "Effect of different pore forming agent on properties of LECA", in proceedings of 1st National Conference on Emerging Trends in Engineering, Technology & Management, 31/01-01/02/2014, Indus University, Rancharda, Ahmedabad, Gujarat, India.

- [35] **S.K. Chaudhury** and D. Apelian, “Fluidized bed: An energy efficient heat treating technology for cast Al alloys”, in proceedings of ASM heat treating society conference, Sept., 2007, Detroit, MI, USA.
- [36] J. Keist, D. Apelian, and **S.K. Chaudhury**, “Fluidized bed quenching performance and its application for heat treating aluminum alloys”, in proceedings of ASM heat treating society conference, Sept., 2007, Detroit, MI, USA.
- [37] J. Keist, D. Apelian, and **S.K. Chaudhury**, “Energy efficiency for fluidized bed heat treating of aluminum alloys”, in proceedings of ASM heat treating society conference, Sept., 2007, Detroit, MI, USA.
- [38] D. Apelian and **S.K. Chaudhury**, “Effects of heating rates during post-solidification thermal processing”, in proceedings of Light Metals Technology Conference, Quebec, Canada, Sept., 2007.
- [39] D. Apelian and **S.K. Chaudhury**, “Heat treatment of Aluminum cast components-Recent developments and future challenges”, World Foundry Organization Congress, St. Louis, MO, USA, April, 2005.
- [40] **S.K. Chaudhury** and D. Apelian, “Fluidized bed heat treatment of cast Al alloys”, in proceedings of John Campbell Symposium, TMS annual meeting, California, USA, Feb-2005, p. 283-292.
- [41] **S.K. Chaudhury**, Q. Pan, J. Heimsch, and D. Apelian, “Response of semi-solid processed Al based cast alloy during fluidized bed heat treatment”, in proceedings of 8th International Conference on Semi Solid Processing of Metals and Alloys, Limassol, Cyprus, 21-23 September, 2004, published by NADCA, Wheeling, Illinois.
- [42] **S.K. Chaudhury**, I. Chottoraj, S.C. Sivaramakrishnan and S.C. Panigrahi, “Electrochemical response of spray formed and stir cast Al-TiO₂ composites” in proceeding of “Advances in Materials Processing and Technology” conference, Ireland, June 2003.
- [43] **S.K. Chaudhury**, C.S. Sivaramakrishnan and S.C. Panigrahi, “Synthesis and characterization of Al-TiO₂ composites through a modified spray forming technique” in proceeding of “International conference on spray deposition and melt atomization/ ICSF”, June 2003 at Bremen, Germany, p. 3-55-64.
- [44] M. M. Makhlof, D. Apelian, **S.K. Chaudhury** and C. Bergman, “Heat treatment of aluminium cast components in fluidized bed”, in proceedings of the 1st International Light Metals Technology Conference, Brisbane, Australia, 18-20 September, 2003, Edited by A. Dahle, p. 371-376.
- [45] **S.K. Chaudhury**, S. Shankar, D. Apelian, and J. Vanwert, “Short Cycle Heat Treating with Fluidized Beds: Structure Evolution”, in proceeding of International Conference on Structural Aluminum Casting, Orlando, Florida, USA, November 2-4, 2003.
- [46] **S.K. Chaudhury**, C.S. Sivaramakrishnan, and S.C. Panigrahi, “A novel Technique to synthesise Aluminium rutile composite through spray casting”, National Symposium for research scholars, IIT, Madras, September, 2000.
- [47] A.K. Ray, L.C. Pathak, K. Venkateswarlu, **S.K. Chaudhury**, and C.S. Sivaramakrishnan, “Aluminium based composites: Emerging non-ferrous engineering materials, proceeding of “International conference on NFM&M, 2000, Jamshedpur, India, p. 173-181.

Book Articles:

- [48] **S.K. Chaudhury**, “Homogenization”, ASM Handbook, Casting, Vol. 15, 2008, p. 402-403.
- [49] **S.K. Chaudhury**, “Heat Treatment”, ASM Handbook, Casting, Vol. 15, 2008, p. 404-407.

Patent:

- [50] **S.K. Chaudhury**, K. Venkateswarlu, L.C. Pathak, and A.K. Ray, “A process for preparation of aluminium – rutile composite through a spray forming technique”, Patent No. 194702, Grant dated: 17/02/2006.