

## **Dr. Roy Johnson**

**Scientist G & Associate Director  
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**Dr. Roy Johnson** is currently the Scientist G and Associate Director of Advanced Research Centre (ARCI), Department of science & Technology, Government of India Hyderabad. Dr. Johnson was awarded the PhD degree for the research carried out at National Environmental Engineering Research Institute, (NEERI) Nagpur. He has joined ARCI, in 1994 and worked in various capacities and led several research projects in the area of advanced ceramics, transparent ceramics, cellular ceramics chemical vapour deposition and Isostatic Pressing. In addition to the basic research, he was successful in realizing various technologies leading to commercialization of products in the strategic and civilian industrial sectors. Ceramic honeycomb-based energy efficient heaters and antimine boots which are developed for the first of its of kind and also infrared transparent windows and domes are some of the successful technology development programmes led by him. Several focused R &D initiatives conceptualized by him over a period of last few years has resulted in the establishment of unique facilities and a team of scientists with leading expertise in ceramic processing and shaping in the country. Currently, in the capacity of Associate Director, ARCI, he provides leadership to three major centers of excellence namely ceramic processing, non-oxide ceramics and sol-gel based nano-composite coatings.

He has 101 research publications in international Journals and 10 Indian patents for his credit. He has edited the Handbook of Advanced Ceramics and Composites Defense, Security, Aerospace and Energy Applications (Vol. I and Vol II), being published by Springer Nature, Switzerland. He also co-authored two books and contributed six book chapters. He is a recognized research supervisor and guided 7 students for their Ph.D degree and 2 PDFs.

He is a Fellow of Indian Institute of Ceramics and Institution of Chemists and also a member of several Indian and International professional bodies. He was the theme leader for ceramics in Indo-German Frontiers of Engineering Symposium 2014. He is also the recipient of many awards including MRSI medal 2012 (Materials Research Society), ARCI Technology award 2012 and Pandit Madan Mohan Malaviyaji award (Indian Ceramic Society-2011).

## **CURRICULUM VITAE**

- Name of Supervisor** : Dr. Roy Johnson
- Designation** : Scientist-G and Associate Director, ARCI
- Contact Details** : International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Balapur, Hyderabad-500 05  
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040-24452306
- Academic Qualifications** : Doctor of Philosophy, Ph. D
- Professional Experience** : 28 years of research experience after obtaining Ph.D.
- Research Interests** : Ceramic processing, Transparent Ceramics, Cellular Ceramics, Chemical Vapour Deposition, Hot Isostatic Pressing, Glass ceramics, 3D printing and Thermal Analysis.
- List of Research Papers** : 101 (Annexure I)
- List of patents granted** : 10 (Annexure II)
- List of Books published** : 02 (Annexure III)
- Invited talks / Inaugural address/ Foundation day lectures:** 46
- Honors / Awards** : (Annexure IV)
- Number of Ph.D/Post Docs Supervised** : 07 (Annexure V)
- Membership of Professional Bodies** : (Annexure VI)
- Peer Recognition** : (Annexure VII)
- Technology Transfers in Ceramics leading to commercial products:** 06

## List of Publications (Annexure I)

1. 3D Printing of MgAl<sub>2</sub>O<sub>4</sub> Spinel Mesh and Densification through Pressure-less Sintering and Hot Isostatic Pressing, *3D Printing and Additive Manufacturing* (2021), <https://doi.org/10.1089/3dp.2021.0034>
2. In vitro evaluation of magnesium aluminate [MgAl<sub>2</sub>O<sub>4</sub>] spinel ceramic based polyphasic composite scaffold for craniofacial bone tissue engineering, *Ceramics International* 47 (2021) 13678–13692
3. Effect of parameters on 3D printing of alumina ceramics and evaluation of properties of sintered parts, *Journal of Asian Ceramic Societies* (2021), <https://doi.org/10.1080/21870764.2021.1920159>
4. Comparative Study on Compaction and Sintering Behavior of Spray and Freeze Granulated Magnesium Aluminate Spinel *Transactions of Indian Ceramic Society* 80 (2021) 1-8
5. A novel approach of synthesizing nano Y<sub>2</sub>O<sub>3</sub> powders for the fabrication of submicron IR transparent ceramics, *Ceramics International* 47 (2021) 16986–16999
6. 3D printing of high surface area ceramic honeycombs substrates and comparative evaluation for treatment of sewage in phytoid application, *Journal of Water Processing Engineering* 37 (2020) 101503 1-6
7. Studies on correlation of surface properties, colloidal shaping and transparency of magnesium aluminate spinel powder, *Materials Chemistry and Physics* 252 (2020) 123372
8. 3D printing of cordierite honeycomb structures and evaluation of compressive strength under quasi-static condition, *International Journal of Applied Ceramic Technology* 17 (2020) 211-216
9. Effect of nickel coating on the mechanical behaviour of polymer replicated Al<sub>2</sub>O<sub>3</sub> foams, *Ceramics International* 46 (2020) 6871–6877
10. Fabrication of complex shaped ceramic articles from 3D printed polylactic acid templates by replication process, *Ceramics International* 45 (2019) 19577-19580
11. 3D Extrusion Printing of Magnesium Aluminate Spinel Ceramic Parts Using Thermally Induced Gelation of Methyl Cellulose, *Journal of Alloys and Compounds* 770 (2019) 419-423
12. Oxidation resistant TiO<sub>2</sub>–SiO<sub>2</sub> coatings on mild steel by Sol–Gel, *Surface & Coatings Technology* 378 (2019) 125041 1-8.

13. Structure- property correlation in IR transparent zinc sulphide (ZnS) ceramics under chemical vapour deposited and hot isostatically pressed conditions, *Journal of Applied Materials Science and Engineering Research* 3 (2019) 1-6
14. Oxidation Resistant TiO<sub>2</sub>-SiO<sub>2</sub> Coatings on Mild Steel by Sol-Gel, *Surface & Coatings Technology* 378 (2019) 125041
15. 3D printing of complex shaped alumina parts, *Ceramics International* 44 (2018) 19278-19281
16. Mechanical Behavior of Alumina based Reticulated Foams Encapsulated and Infiltrated with Polymer under Quasistatic and Dynamic Conditions, *Transactions of Indian Ceramic Society* 77 (2018) 1-4
17. Thermal degradation of ceramic slurry-coated polyurethane foam used in making reticulated porous SiC ceramics, *Journal of Thermal Analysis and Calorimetry* 131 (2018) 2603-2610
18. Preparation and comparative evolution of mechanical behavior of Fe and Fe<sub>2</sub>O<sub>3</sub> foams and their polymer composites, *Journal of Alloys and Compounds* 750 (2018) 71-76
19. Processing and properties of sintered submicron IR transparent alumina derived through sol-gel method, *Journal of Sol-gel Science and Technology* 86 (2018) 374-372
20. Sintering behaviour, microstructural characterisation and thermal expansion properties of Sn substituted ZrMo<sub>2</sub>O<sub>8</sub>, *Ceramics International*, 44 (2018) 1922-1928
21. Flash-sintering of Magnesium Aluminate Spinel (MgAl<sub>2</sub>O<sub>4</sub>) Ceramics, *Journal of the American Ceramic Society* 100 (2017) 554-562
22. Effect of Room and High Temperature Compaction on Optical and Mechanical Properties of HIPed Transparent Spinel Ceramics, *Advance Engineering Materials* 19 (2017) 1700111-1 – 1700111-7
23. Comparative evaluation of electrical conductivity of hydroxyapatite ceramics densified through ramp and hold, spark plasma and post sinter Hot Isostatic Pressing routes, *Materials Science and Engineering C* 70 (2017) 364–370
24. Development of Cordierite based Reticulated Foams with Improved Mechanical Properties for Porous Burner Applications, *Transactions of Indian Ceramic Society* 76 (2017) 56-61
25. Fabrication of MgAl<sub>2</sub>O<sub>4</sub> Spinel Scaffolds and Sonochemical Synthesis and Deposition of Hydroxyapatite Nanorods, *Journal of the American Ceramic Society* 99 (2016) 1544–1549
26. Fabrication of graphite contamination free polycrystalline transparent MgAl<sub>2</sub>O<sub>4</sub> spinel by spark plasma sintering using platinum foil, *Ceramics International* 42 (2016) 17920–17923

27. Quasi-static compression behavior of nickel oxide, nickel oxide: zirconia, nickel:zirconia and nickel foams, *Ceramics International* 42 (2016) 10572–10578
28. Prediction and validation of buckling stress ( $\sigma_{cr}$ ) of the ceramic honeycomb cell walls under quasi-static compression, *Cogent Engineering* 3 (2016) 1168068 1-7
29. Fabrication of IR Transparent Zinc Sulphide Plate by Chemical Vapor Deposition (CVD), *Indian Journal of Chemical Technology* 23 (2016) 400-404
30. Compaction curves: A tool for qualitative evaluation of quasi-static compaction behaviour of ceramic powder, *Journal of The Australian Ceramic Society* 51 (2015) 130-136
31. Sonochemical Synthesis of Nano-Structured Hydroxyapatite with unique morphologies and Evaluation of Sintering Kinetics, *Journal of Advances in Chemistry* 11 (2015) 3789-3797
32. Processing of Alumina Honeycomb Catalyst Substrates and Studies on Methyl Cellulose Binder Burn Out Kinetics, *Journal of Advanced Catalysis Science and Technology* 2 (2015) 38-43
33. Binder burnout and sintering kinetic study of alumina ceramics shaped using methylcellulose, *Journal of Ceramic Processing Research* 16 (2015) 24-31
34. Synthesis, Extrusion Processing and Ionic Conductivity Measurements of Sodium  $\beta$ -Alumina Tubes, *Processing and Application of Ceramics* 9 (2015) 131-138
35. Mixing Torque Measurement : An effective tool for identifying the Critical Binder Volume Concentration for Ceramic Processing, *JSIR* 75 (2015) 504-507
36. Thermal conductivity in yttria dispersed copper, *Materials and Design* 65 (2015) 869-877
37. Effect of Primary Particle Size on spray formation, morphology and internal structure of alumina granules and elucidation of flowability and compaction behavior, *Processing and Application of Ceramics* 8 (2014) 93-99
38. Effect of fuel concentration on physico-chemical properties of combustion synthesized magnesium aluminate spinel powders *Transaction of Indian Ceramic Society* 73 (2014) 303-306
39. Optical and mechanical properties of compaction and slip cast processed transparent polycrystalline spinel ceramics, *Ceramics International* 40 (2014) 5575-5581
40. Transparent Magnesium Aluminate Spinel: A Prospective Biomaterial for Esthetic Orthodontic Brackets, *Journal of Materials Science: Materials in Medicine* 25 (2014) 2591-2599

41. Colloidal Shaping of 8 mol% Yttria Stabilized Zirconia Electrolyte Honeycomb Structures by Microwave Assisted Thermal Gelation of Methyl Cellulose, *International Journal of Applied Ceramic Technology* 11 (2014) 154-163
42. Hot isostatic pressing of ZnS powder and CVD zinc sulphide ceramics and comparative evaluation of physico-chemical, microstructural and transmission properties, *Transactions of Indian Ceramic Society* 73 (2014) 299-302
43. Effect of Surface Passivation in Spinel Slurry towards Hydrolysis: Neutron Scattering and Rheological Studies, *Journal of Dispersion Science and Technology* 35 (2014) 1442-1448
44. Eutectoid decomposition of aluminum titanate ( $\text{Al}_2\text{TiO}_5$ ) ceramics under spark plasma (SPS) and conventional (CRH) thermal treatments, *Ceramic International* 40 (2014) 659-666
45. High temperature flexural strength and thermal stability of near zero expanding doped aluminum titanate ceramics for DPF Applications, *International Journal of Applied Ceramic technology* 11 (2014) 773-782
46. Extrusion processing of Dense  $\text{MgAl}_2\text{O}_4$  Spinel Honeycombs with Low Relative Density, *Ceramic International* 39 (2013) 9819-9821
47. Transparent Sub-micrometer Alumina from Lanthanum Oxide Doped Common Grade Alumina Powder, *Ceramic International* 39 (2013) 9415-9419
48. Fabrication of Transparent Spinel Honeycomb Structures by Methyl Cellulose based Thermal Gelation Processing, *Journal of American Ceramic Society* 96 (2013) 3042-3045
49. Thermally Induced Gelation of Alumina Shaping- Neutron Scattering and Rheological Measurements, *Open Journal of Inorganic Chemistry* 3 (2013) 48-54
50. Experimental Investigation on Flowability and compaction behavior of Spray granulated submicron Alumina Granules, *ISRN Ceramics* 2013 (2013) 1-6
51. Studies on sintering kinetics and correlation with the sinterability of 8Y zirconia ceramics based on the dilatometric shrinkage curves, *Ceramics International* 39 (2013) 4985-4990
52. Flow properties of spray dried alumina granules using powder flow analysis technique, *Advanced Powder Technology* 24 (2013) 667-673
53. Mineral oxide doped aluminum titanate ceramics with improved thermo-mechanical properties, *Journal of Ceramics* 214794 (2013) 1-9
54. Pressure slip casting: A novel process for producing alumina bodies with superior green density, *Interceram* 62 (2013)

55. Effect of micro-cracking on the thermal conductivity and thermal expansion of titanate ( $\text{Al}_2\text{TiO}_5$ ) ceramics, *Journal of Processing and Application of ceramics* 7 (2013) 143–146
56. Pressure slip casting and cold isostatic pressing of aluminum titanate green ceramics: A comparative evaluation, *Journal of Processing and Application of ceramics* 7 (2013) 159–166
57. Diametral Deformation Behaviour and Machinability of Methyl Cellulose Thermal Gel cast Processed Alumina Ceramics, *Ceramic International* 38 (2012) 6115–6121
58. Transparent Polycrystalline Ceramics: An Overview, *Transaction of Indian Ceramic Society* 71 (2012) 73–85
59. Low Temperature In-situ Reaction Sintering of Zircon: Alumina Composites Through Spark Plasma Sintering, *Science of Sintering* 44 (2012) 323–330
60. Effect of Nano-Grain Size on the Ionic Conductivity of Spark Plasma Sintered 8YSZ Electrolyte, *International Journal of Hydrogen Energy* 37 (2012) 511–517
61. Synthesis and evaluation of Thermal, electrical and electrochemical properties of  $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.04}\text{Zn}_{0.16}\text{Fe}_{0.8}\text{O}_{3-\delta}$  as a novel Cathode material for IT-SOFC applications, *Ionics* 18 (2012) 891–898
62. The effect of strontium doping on densification and electrical properties of  $\text{Ce}_{0.8}\text{Gd}_{0.2}\text{O}_{2-\square}$  electrolyte for IT-SOFC application, *Ionics* 18 (2012) 291–297
63. Structural and electrical properties of co-doped zirconia electrolyte for intermediate temperature solid oxide fuel cell application, *International Journal of Energy Research* 36 (2012) 1291–1297
64. Comparative nanoparticle size characterization of EEW Alumina using various measurements techniques, *Particulate science and Technology* 30 (2012) 517–532
65. Comparative evaluation of thermal conductivity of zirconia solid and honeycomb structures, *Experimental Heat Transfer* 25 (2012) 267–281
66. Colloidal Shaping of Alumina Ceramics by Thermally Induced Gelation of Methyl Cellulose, *Journal of American Ceramic Society* 94 (2011) 749–753
67. Effect of Sphalerite to Wurtzite Crystallographic Transformation on Microstructure, Optical and Mechanical Properties of Zinc Sulphide Ceramics, *Ceramic International* 37 (2011) 1039–1046
68. Studies on Ionic Conductivity of stabilized zirconia ceramics (8YSZ) densified through conventional and non-conventional sintering methodologies, *Journal of Ceramics International* 37 (2011) 3557–3564

69. Hydrolysis control of alumina and AlN mixture for aqueous colloidal processing of aluminium oxynitride, *Ceramic International* 37 (2011) 583-2590
70. Fracture Behaviour of Chemical Vapour Deposited and Hot Isostatically Pressed Zinc Sulphide Ceramics, *Material Science and Engineering A* 528 (2011) 5030-5035
71. Rheological studies on aqueous alumina extrusion mixes, *Transactions of the Indian Institute of Metals* 64 (2011) 541-547
72. Comparative Evaluation of Spark Plasma (SPS), Microwave (MWS), Two Stage (TSS) and conventional Sintering on the densification and micro-structural evolution of 8 YSZ zirconia ceramics, *Science of Sintering* 42 (2010) 259-267
73. Micro structural control of stabilized zirconia ceramics (8YSZ) through modified conventional sintering methodologies, *Science of Sintering* 42 (2010) 91-97
74. Fluoride removal from ground water by  $\gamma$ -alumina coated ceramic honeycomb, *Water Practice and Technology* 5 (2010) 1-9
75. Effect of post CVD thermal treatments on crystallographic orientation, microstructure, mechanical and transmission Properties of ZnS Ceramics, *Journal of Alloys Compounds* 496 (2010) 273-277
76. Processing of Aluminium Oxynitride Through Aqueous Colloidal Forming Techniques, *Journal of American Ceramic Society* 93 (2010) 429-435
77. Effect of relative density on the compressive flow behaviour of cordierite and cordierite: Mullite honeycombs, *Transactions Indian Institute of Metals* 63 (2010) 701-706
78. Rate Controlled Sintering: A unique Concept for Micro-structural Control, *Transactions of the Indian Ceramic Society* 66 (2007) 157 -166
79. Hidden ceramics in Energy and Transport Sectors- Current Status and Road Map for the Future, Proceedings of the 1st International Congress on Ceramics, Toronto Canada, June 2006. Eds S. Freiman, *The American Ceramic Society*, p 553-594 (2007).
80. Formation and densification behaviour of  $MgAl_2O_4$  spinel: the influence of CaO and moisture in the precursors, *Journal of the American Ceramic Society* 88 (2005) 2752-2761
81. Microwave assisted combustion synthesis of nanocrystalline  $MgAl_2O_4$  spinel powders, *Ceramic International* 31(2005) 67-74
82. Microwave assisted solid-state reaction synthesis of  $MgAl_2O_4$  spinel powders, *Journal of European Ceramic Society* 24 (2004) 201-207



83. Microwave induced combustion synthesis of nanocrystalline  $\text{TiO}_2\text{-SiO}_2$  binary oxide, *Journal of Materials Research* 19 (2004) 1015-1023
84. Kaoline - based cordierite for pollution control, *Journal of European Ceramic Society* 24 (2004) 65-73
85. Studies on energy absorption characteristics of cordierite-mullite honeycombs, *Journal of Advanced Materials* 35 (2003) 3-8
86. Effect of preparation method on sinterability and properties of nanocrystalline  $\text{MgAl}_2\text{O}_4$  and  $\text{ZrO}_2\text{-MgAl}_2\text{O}_4$  materials, *British Ceramic Transactions* 102 (2003) 119-128
87. Solid state reactions of cordierite precursor oxides and effect of substitution of CaO on the thermal expansion behaviour of cordierite honeycomb structures, *Journal of Materials Science* 38 (2003) 2953-2961
88. Effect of rubber encapsulation on the comparative mechanical behavior of ceramic honeycombs with foams, *Materials Science and Engineering* A347 (2003) 109-122
89. An efficient  $\text{MgAl}_2\text{O}_4$  spinel additive for improved slag erosion and penetration resistance of high- $\text{Al}_2\text{O}_3$  and MgO-C refractories, *Ceramics International* 28 (2002) 245-253
90. Glimpses of ceramics – ARCI's perspectives, **Proceedings of US-Japan Workshop (2002) on "Low cost production of ceramics and related materials"**, Osaka, Japan, pp. 49– 57, (2002)
91. Cellular Solids: Unique Engineering Solids, *Material Research: Current Scenario and Future Projections, Material Research Society of India (2002), India*
92. Thermal anisotropy in sintered cordierite monoliths, *Materials Chemistry and Physics* 67 (2001) 140-145
93. A new sintering aid for magnesium aluminate spinel, *Ceramics International* 27 (7) 773-779 (2001)
94. Ceramic based catalytic converter for diesel vehicles, *Transactions of the Indian Ceramic Society* 59 (2000) 93-95
95. Catalytic Oxidation of Carbon monoxide and hydrocarbons on supported Zinc ferrite, *Journal of the Institution Public Health Engineers* 1 (1994) 1-7
96. Atomic Absorption spectrophotometric determination of trace Metals in Suspended Particulate Matter, *Journal of Environmental Protection* 10 (1990) 614 – 618
97. Colloidal shaping of transparent spinel through slip casting using contamination free spinel moulds, *Optik* (2021)

98. Zinc Sulphide Ceramics for Infrared Optics, **Handbook of Advanced Ceramics and Composite Applications**, (ed.) Y.R. Mahajan and Roy Johnson, Springer Nature, Vol. 1, p 533-567, 2020
99. Processing of Infrared Transparent Magnesium Aluminate Spinel: An Overview, **Handbook of Advanced Ceramics and Composites**, (ed.) Y.R. Mahajan and Roy Johnson, Springer Nature, Vol. 1, p 495-531, 2020
100. Patenting trends in additive manufacturing of ceramic materials, **Handbook of Advanced Ceramics and Composites** (ed.) Y. R. Mahajan and Roy Johnson, Springer Nature, Vol. 1, p 319-354, 2020
101. Transparent Ceramics for Ballistic Armor Applications, **Handbook of Advanced Ceramics and Composites**, (ed.) Y. R. Mahajan and Roy Johnson, Springer Nature, Vol.1, p 435-457, 2020

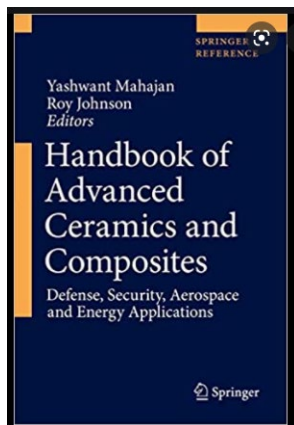
### **List of Patents (Annexure II)**

1. A Process of preparation of zinc sulphide free standing article by chemical vapour deposition, R. Senthil Kumar, P. Ramavath, P. Biswas, U. S. Hareesh and **R. Johnson. (Indian patent IN2009005-I1, Commercialized)**
2. An Ecofriendly Incinerator to Dispose of the Sanitary Napkins and Bio Medical Waste” Appl. No. 201821021430 Dt 07.06.2018, VV S Rao, Y Srinivasa Rao, **Roy Johnson**, G Padmanabham, Gupta Ankit, Labhasetwar Nitin Kumar, Kumar Rakesh **(Indian patent Commercialized)**
3. Ceramic Honeycomb Based Energy Efficient Air Heater, V.V.S. Rao, **Roy Johnson**, B.P.Saha and Y.R. Mahajan, **(Indian Patent. No. 2007787 Dated 07-01-99) ) Commercialized**

4. New Composite Material (Ceramic Honeycomb based) having good Shock Attenuating Properties, **Roy Johnson**, B.P.Saha and Y.R. Mahajan (**Indian Patent. No. 194524 Dated 06-05-98) being Commercialized**
5. An improved process for the production of dense magnesium aluminate spinel grains, I.Ganesh, Subir Bhattacharjee, B.P. Saha, **Roy Johnson**, and Y.R. Mahajan (**Indian Patent. No. 200272 Dated 07-01-99) Commercialized**
6. Improved process for the preparation of magnesium aluminate spinel grain, M.C.S. Rao, Y.R. Mahajan, S. Bhattacharjee, **Roy Johnson**, B.P. Saha, and I Ganesh, (**Indian Patent. No. 198208 Dated 06-07-2000) Commercialized**
7. An improved process for preparing ceramic crucibles having high thermal shock resistance and high slag penetration resistance useful for carbon and sulfur analysis of ferrous alloys and steel samples and the ceramic crucibles so prepared, B.P. Saha, Y.R. Mahajan, S. Bhattacharjee, I. Ganesh and **Roy Johnson (Indian Patent. No.2007700 ) Commercialized**
8. An improved method for making honeycomb extrusion die and a process for producing Ceramic honeycomb structures using the die Iouri Fomichev, I.Ganesh, B.P. Saha **Roy Johnson**, N. Thiyagarajan, Y.R. Mahajan, and V. Mahender. (**Indian Patent. No. 198045, Dated: 3 -07-01)**
9. Improved additive composition useful for the preparation of alumina-based abrasion resistant material having improved wear properties and methods for their preparation, B.P. Saha, **Roy Johnson**, I. Ganesh, S. Bhattacharjee, and Y.R. Mahajan (**Indian patent 198068 dated 07-07-2006)**
10. A novel process for producing IR transparent polycrystalline alumina articles and the articles so produced, P. Biswas, K. Rajeswari, V. Mahender, P. Ramavath, Rajasekhara Reddy, **R. Johnson**, U. S. Hareesh (**Application No.: 365/DEL/2012, Filing date: 08-02-2012)**

### List of Books (Annexure III)

1. Handbook of Advanced Ceramics and Composites, Defense, Security, Aerospace and Energy Applications (ed.) Y. R. Mahajan and Roy Johnson, Springer Nature, Vol.1 & Vol II, 2020



2. Redox Catalysts in Air Pollution Control: Authors: Roy Johnson and A.N. Garg, Lambert Academic Publishing, ISBN 978-3-8465-8064-6, 2012

### Ph.D /Post- doctoral Fellows Supervised (Annexure IV)

#### Ph.D Degree supervised

1. Experimental investigation of Sintering techniques on microstructural Evolution of Zirconia Ceramic by Ms. K. Rajeswari (**Ph.D awarded in Materials Engineering**), Central University, Hyderabad, 2010
2. Investigation on thermo-mechanical properties of Aluminium Titanate Ceramics by Ms. R. Papitha (**Ph.D awarded in Materials Engineering**), Central University, Hyderabad, 2010
3. Comparative Evaluation of CVD and Powder Processing of Manganese Aluminate Ceramics for Physico-Chemical, Thermal and Mechanical Properties by Ms. Papiya Biswas, **Ph.D awarded in Metallurgical Engineering** , NIT, Warangal 2018
4. Development of Powder Encapsulation Process for Hot Isostatic Pressing and Evaluation of Thermo- mechanical Properties of Ceramic Parts, Mr. Pandu Ramavath, **Ph.D Thesis submitted ( Mechanical Engineering)** , Osmania University
5. Fabrication and characterization of transparent ceramic parts using sol-gel derived powders, Mr.Senthil Kumar, **Ph.D being awarded in Metallurgical and materials Engineering** , NIT, Warangal 2021

6. Near-net shaping of simple and complex ceramic parts by 3D printing and investigations on the thermo-mechanical and microstructural properties, Mrs. S. Mamata (**Ph.D thesis submitted in Materials Engineering**), Central University, Hyderabad, 2010 ( in progress)
7. Fabrication and studies on mechanical behavior of ceramic and metallic foam structures, Mr..K. Raju, **Ph.D thesis being submitted in Metallurgical and materials Engineering** , NIT, Warangal 2021

#### **Post-Doc Fellowships supervised**

1. Studies on Chemical Vapour Deposition of ZnS Ceramics, Mrs. K. Rajeswari
2. Correlation of powder properties with the optical properties of transparent Spinel, Mrs. Swathi Manivannan

#### **Honours/Awards (Annexure-V)**

1. Received Materials Research Society medal (MRSI- Medal) 2011
2. Received Pandit Malaviya Award of the Indian Ceramic Society, 2011
3. Received Technology award 2012 from ARCI
4. Theme leader for Indo-German Frontiers of Engineering Symposium 2014.
5. Panelist for VAIBHAV summit (**Vaishwik Bharatiya Vaigyanik Summit**)- 2021
6. Received the **Best Product Award** for the thin walled Honeycomb structures during **POWMET-99** during the international conference and annual technical meeting of Powder Metallurgy Association of India, 1999
7. Received the Best Paper Award for presentation on the mechanical behaviour of cordierite-Mullite honeycomb with foams during 13th Annual General meeting of **Material Research Society of India**, February 2002
8. Received the Best Paper Award for presentation on the Rheometric Studies on cordierite Mullite precursor mix for extrusion of honeycombs during the 66<sup>th</sup> Annual Session of **Indian Ceramic Society**. December 2002
9. Received the **Best Poster Award** by the group for the presentation on Fracture behaviour of ZnS Ceramics during the 73 rd Annual Session of **Indian Ceramic Society**. December 2009
10. Listed in **Marquis Who's Who in the World (2011)**, USA for the significant contributions to the betterment of contemporary society

11. 9. Received **Doctor of Ministry (D. Min), 2010** from Logos Study Centre (affiliated with International Institute of Church Management, Florida, USA)

### **Membership of Professional Societies (Annexure- VI)**

1. Fellow of Indian Institute of Ceramics (**FIICER**)
2. Fellow of Institution of Chemists (**FIC**)
3. Life Member, **Indian Ceramic Society**
4. Member (2008-2010) **American Ceramic Society**
5. Associate Member of **Institution of Chemists**
6. Life Member of **Indian Association for Environmental Management (IAEM)**, NEERI, Nagpur.
7. Life Member of **Indian Association for Nuclear Chemists and Allied Scientists (IANCS, Bombay)**.
8. Member (licentiate) of **Royal Society of Chemistry**, London. (1995)
9. Life Member, **Sensor Research Society**, India (2019)

### **Peer Recognition (Annexure-VI)**

Manuscript reviewer for:

- Journal of American Ceramic Society
- Ceramic International
- Journal of Alloys and Compounds
- Journal of Solid State Chemistry
- Journal of Material Science
- Ionics
- Transactions of Indian Ceramic Society