

List of Publications of Dr. M. Sai Baba

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Publications in Journals (58):

1. Development and customization of in-house developed OCR and its evaluation
S. Rajeswari, M. Sai Baba
The Electronic Library, 2018
(<https://doi.org/10.1108/EL-01-2018-0011>)
2. An Empirical Study on the Asymmetric Behavior of Scientometric Indicator for Journal:
A Comparative Evaluation of SJR and H-Index
Deepjyoti Kalita, M. Sai Baba, Dipen Deka
SRELS Journal of Information Management 55(2018)128-140
3. Metadata Creation Methods: A Study
Tanmay Mondal, N. Madurai Meenachi, **M. Sai Baba**
Journal of Advances in Library and Information Science 7(2018)177-182
4. Application of Pareto optimization method for ontology matching in nuclear reactor domain
N.M. Meenachi, **M. Sai Baba**
Kerntechnik 82(2017)678-684 (impact parameter: 0.257)
5. Brackish water RO plant as a variable load for renewables based hybrid power system for increased power input
R. Nagaraj, D. Thirugnanamurthy, M.M. Rajput, **M. Sai Baba**
Desalination and Water Treatment 88(2017)33-40 (impact parameter: 1.631)
6. Numerical Simulation of Miniature Mutual Inductance Type Leak Detector for FBTR
B. Babu, **M. Sai Baba**, B.P.C. Rao, K.K. Rajan
IETE Technical Review 2016 (pages 1-8) (impact parameter:1.339)
7. Thermodynamic Properties over ($\text{Ni}_2\text{Te}_3\text{O}_8 + \text{NiTe}_2\text{O}_5$) in The Ni–Te–O System: Transpiration Thermogravimetric and Knudsen Effusion Mass Spectrometric Studies
T.S. Lakshmi Narasimhan, P. Manikandan, V.V. Trinadh, **M. Sai Baba**
International Journal of Materials Research 107 (2016) 158-167 (impact parameter: 0.681)
8. Matrix rank based ontology matching: an extension of string equality matching
N. Madurai Meenachi, **M. Sai Baba**
International Journal of Nuclear Knowledge Management 7(2017) 1-11

9. Application of Genetic Algorithm methodologies in fuel bundle burnup optimization of Pressurized Heavy Water Reactor
M.L. Jayalal, SujaRamachandran, S. Rathakrishnan, S.A.V. Satya Murty, **M. Sai Baba**
Nuclear Engineering and Design 281 (2015) 58–71 (impact parameter: 1.655)
10. Vaporization studies over (NiO + Ni₂Te₃O₈) in the Ni–Te–O system by transpiration thermogravimetry and Knudsen effusion mass spectrometry
T.S. Lakshmi Narasimhan, S. Nalini, **M. Sai Baba**
Thermochimica Acta 600(2015)67–76 (impact parameter: 2.189)
11. Development of Semantic Web-based Knowledge Management for Nuclear Reactor (KMNuR) Portal
N. Madurai Meenachi, **M. Sai Baba**
DESIDOC Journal of Library & Information Technology 34(2014)426-434 (impact parameter: 0.64)
12. Neural Network Model for an Event Detection System in Prototype Fast Breeder Reactor
Subhra Rani Patra R. Jehadeesan, T.V. Santosh, T.Jayanthi, S.Rajeswari, S.A.V. Satya Murty, **M. Sai Baba**
International Journal of Recent Technology and Engineering 2(2014)2277-3878
13. A Survey of Genetic Algorithm Applications in Nuclear Fuel Management
M.L. Jayalal, S.A.V. Satya Murty, **M. Sai Baba**
Journal of Nuclear Engineering & Technology 4(2014)45-62 (impact parameter: 0.045)
14. Vaporization studies on elemental tellurium and selenium by Knudsen effusion mass spectrometry
R. Viswanathan, R. Balasubramanian, D. Darwin Albert Raj, **M. Sai Baba**
T.S. Lakshmi Narasimhan
Journal of Alloys and Compounds 603(2014)75–85 (impact parameter: 3.779)
15. Quick Mapping Evaluator – Application For Ontology Mapping Evaluation: A Case Study on Nuclear Reactor Domain
N. Madurai Meenachi, N. Hari Prasad, **M. Sai Baba**
International Journal of Nuclear Knowledge Management 6(2013)143-154
16. A Survey on Usage of Ontology in Different Domains
N. Madurai Meenachi, **M. Sai Baba**
International Journal of Applied Information Systems 4(2012)46-55
17. Web Ontology Language Editors for Semantic Web - A Survey
N. Madurai Meenachi, **M. Sai Baba**
International Journal of Computer Applications 53(2012)12-15 (impact parameter: 0.041)
18. Neural Network Modeling for Evaluating Sodium Temperature of Intermediate Heat Exchanger of Fast Breeder Reactor
Subhra Rani Patra, R. Jehadeesan, S. Rajeswari, Indranil Banerjee;
S.A.V. Satya Murty, G. Padmakumar, **M. Sai Baba**
Advances In Computing 2(2012)16-22

19. Development of Genetic Algorithm based Neural Network model for parameter estimation of Fast Breeder Reactor Subsystem
Subhra Rani Patra, R. Jehadeesan, S. Rajeswari, S. A.V. Satya Murty, **M. Sai Baba**
International Journal of Soft Computing and Engineering 2(2012)2231-2307
20. Kinetic Studies on Saponification of Ethyl Acetate Using an Innovative Conductivity-Monitoring Instrument with a Pulsating Sensor.
P. Kuheli Das, P. Sahoo, **M. Sai Baba**, N. Murali, P. Swaminathan.
International Journal of Chemical Kinetics 43 (2011) 648-656. (impact parameter: 1.386)
21. Semantic Digital Library -Migration of Dublin to RDF
E. Soundararajan, N. Madurai Meenachi, **M. Sai Baba**
IEEE: International Conference on Signal and Image Processing, 2010, 250-254
22. Vaporisation Thermodynamic Studies by High Temperature Mass Spectrometry on Some Three-Phase Regions over the MnO-TeO₂ Binary Line in the Mn-Te-O Ternary System
T.S. Lakshmi Narasimhan, **M. Sai Baba**, R. Viswanathan
Journal of Physical Chemistry A 110(2006) 13705-13711 (impact parameter: 2.836)
23. High burn-up Issues in Fast Breeder Reactor Fuels and Structural Materials
Baldev Raj, S.L. Mannan, K.V. KasiViswanathan, M.D. Mathews, V. Karthik
C.N. Venkiteswaran, **M. Sai Baba**, P. Puthiyavinayagam
Metals Materials and Processes 18(2006)1-16 (impact parameter: 0.045)
24. Fuel-Clad Chemical Interaction Issues in Fast Reactors
P.R. Vasudeva Rao, R. Viswanathan, **M. Sai Baba**, R. Vidhya
Metals Materials and Processes 18(2006)17-26 (impact parameter: 0.045)
25. Mass Spectrometric Studies on Irradiated (U,Pu) Mixed Carbide Fuel of FBTR
R. Balasubramanian, D. Darwin Albert Raj, S. Nalini, **M. Sai Baba**
International Journal of Nuclear Energy Science and Technology 1(2005)197–203
(impact parameter: 3.177)
26. Vaporisation Behaviour of TeO₂(s): A quantitative Vaporisation-Knudsen Effusion Mass Spectrometric Study
T.S. Lakshmi Narasimhan, **M. Sai Baba**, R. Viswanathan
ThermochimicaActa 427(2005)137-147 (impact parameter: 2.236)
27. A Ternary Phase Diagram of the Mn-Te-O System at 950 K
T.S. Lakshmi Narasimhan, **M. Sai Baba**, S. Nalini, R. Viswanathan
ThermochimicaActa 410(2004)149-159 (impact parameter: 2.189)
28. Univariant Three-phase and Four-phase Vaporisation Equilibria in the ternary Mn-Te-O system: a high temperature mass spectrometric study of binary {xMnO+ (1-x)TeO₂} with x ≥ 0.5
T.S. Lakshmi Narasimhan, **M. Sai Baba**, R. Viswanathan
Journal Physical Chemistry B 106(2002)6762-6770 (impact parameter: 3.146)
29. Electronic Structure of Ge₂ and Ge₂⁻ and Thermodynamic Properties of Ge₂ from all Electron ab initio Investigations and Knudsen Effusion Mass Spectroscopic Measurements
I. Shim, **M. Sai Baba**, K.A. Gingerich

Chemical Physics 277(2002)9-20 (impact parameter: 1.707)

30. Vaporisation Studies on (Manganese+Tellurium) with $x(\text{Te}) > 0.5$ by Knudsen Effusion Mass Spectrometry
T.S. Lakshmi Narasimhan, **M. Sai Baba**, R. Balasubramanian, S. Nalini, R. Viswanathan
Journal of Chemical Thermodynamics 34(2002)103-117 (impact parameter: 2.631)
31. Atomisation Enthalpies and Enthalpies of Formation of Ge_3 and Ge_4 by Knudsen Effusion Mass Spectrometry
K.A. Gingerich, **M. Sai Baba**, R.W. Schmude Jr., J.E. Kingcade Jr.
Chemical Physics 262(2000)65-74 (impact parameter: 1.707)
32. Atomisation Enthalpies and Enthalpies of Formation of the Germanium Clusters Ge_5 , Ge_6 , Ge_7 and Ge_8 by Knudsen Effusion Mass Spectrometry
K.A. Gingerich, R.W. Schmude Jr., **M. Sai Baba**, G. Meloni
Journal of Chemical Physics 112(2000)7443-7448 (impact parameter: 2.965)
33. Knudsen Cell Mass Spectrometric Investigation of the B_2N Molecule
G. Meloni, **M. Sai Baba**, K.A. Gingerich
Journal of Chemical Physics 113(2000)8995 (impact parameter: 2.836)
34. Electronic Structure and Properties of the Molecule GeC from all-electron ab initio Calculations and Knudsen Effusion Mass Spectrometric Measurements
I. Shim, **M. Sai Baba**, K.A. Gingerich
The Journal of Physical Chemistry A 102(1998)10673-10677 (impact parameter: 2.836)
35. Vaporisation Behaviour of Tellurium Dioxide: A Knudsen Effusion Mass Spectrometric Study.
T.S. Lakshmi Narasimhan, R. Balasubramanian, S. Nalini, **M. Sai Baba**
Journal of Nuclear Materials 247(1997)28-32 (impact parameter: 2.447)
36. Thermodynamic and Phase Diagram Studies on Metal-Tellurium Systems Employing Knudsen Effusion Mass Spectrometry,
M. Sai Baba, R. Viswanathan, C.K. Mathews
Rapid Communications in Mass Spectrometry 10(1996)691-698 (impact parameter: 1.97)
37. Ionisation and Fragmentation of C_{60} : An Electron Impact Ionisation
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
The Journal of Physical Chemistry 99(1995)3020-3032 (impact parameter: 2.836)
38. Studies on the Thermodynamics of the C_{60} - C_{70} Binary System
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, N. Sivaraman, C.K. Mathews
The Journal of Physical Chemistry 98(1994)1333-1340 (impact parameter: 2.836)
39. Electron Impact Ionisation of Fullerenes: Appearance Potentials of C_{70}^{n+} , $n=1,2$ and 3
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
Rapid communications in Mass Spectrometry 7(1994)1141-1144 (impact parameter: 1.97)
40. Ionisation of C_{60} , Is it Temperature Dependent?
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes 130(1994)L1-L4

(impact parameter: 1.826)

41. Shape of the Ionisation Cross Section Function for $C_{60} + e = C_{60}^+ + 2e$, From Threshold to Maximum: Reply to Comment by Scheir et al.
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes 130(1994)L5-L6
(impact parameter: 1.826)
42. A Mass Spectrometric Study of the Dissociation of the Gaseous Diatomic Tellurium Molecules
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian,
T.S. Lakshmi Narasimhan, C.K. Mathews
Spectrochimica Acta Part B 49(1994)243-250 (impact parameter: 2.854)
43. Homogeneity Ranges and Thermodynamic Properties of the Te-rich Phases in the Cr-TeSystem.
R. Viswanathan, **M. Sai Baba**, T.S. Lakshmi Narasimhan, R. Balasubramanian,
D. Darwin Albert, C.K. Mathews
Journal of Alloys and Compounds 206(1994)201-210 (impact parameter: 3.779)
44. Vapour Pressure and Enthalpy of Sublimation of C_{70}
C.K. Mathews, **M. Sai Baba**, T.S. Lakshmi Narasimhan, R. Balasubramanian,
N. Sivaraman, T.G. Srinivasan, P.R. Vasudeva Rao
Fullerene Science and Technology 1(1993)101-109 (impact parameter: 1.001)
45. Electron Impact Ionisation of Fullerenes: Appearance Potentials of C_{60}^+ , C_{60}^{2+} and C_{60}^{3+}
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes 125(1993)R1-R5
(impact parameter: 1.826)
46. Thermo Chemistry of Metal-rich Manganese Telluride and Its Role in Fuel-clad Interactions
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
Journal of Nuclear Materials 201(1993)147-155 (impact parameter: 2.447)
47. Vaporisation Studies on Buckminsterfullerene.
C.K. Mathews, **M. Sai Baba**, T.S. Lakshmi Narasimhan, R. Balasubramanian,
N. Sivaraman, T.G. Srinivasan, P.R. Vasudeva Rao
The Journal of Physical Chemistry 96(1992)3566-3568 (impact parameter: 2.836)
48. Appearance Potential and Electron Impact Ionisation Cross-section of C_{60}
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes 114, R1-R8
(impact parameter: 1.826)
49. Appearance Energy and Electron Impact Ionisation Cross- section of C_{70}
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes 116(1992)R1-R6
(impact parameter: 1.826)
50. Chemical Activities in the Solid Solution of Hf in Ni_3Al .
M. Alders, **M. Sai Baba**, D. Kath, M. Miller, and K. Hilpert

51. Thermo Chemistry of Metal-Rich Chromium Telluride and Its Role in Fuel-Clad Chemical Interaction.
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, B. Saha, C.K. Mathews
Journal of Nuclear Materials 167(1989)94-104 (impact parameter: 2.447)
52. Thermo Chemistry and Phase Relationships in M-Te (M =Fe,Crand Ni) Systems of Relevance to Fuel-clad Interactions in FastBreeder Nuclear Reactors-
A High Temperature Mass Spectrometric Study
B. Saha, R. Viswanathan, **M. Sai Baba**, C.K. Mathews
High Temperatures-High Pressures 20(1989)47-58 (impact parameter: 0.408)
53. Vaporisation Thermodynamics of (Iron+Tellurium) - a High Temperature Mass Spectrometric Study.
M. Sai Baba, R. Viswanathan, D. Darwin Albert, R. Balasubramanian, B. Saha, C.K. Mathews
Journal of Chemical Thermodynamics 20(1988)1157-1173 (impact parameter: 2.631)
54. Effect of Oxygen and Nitrogen Impurities on the Thermodynamic Properties of Uranium-Plutonium Mixed Carbide Fuel,
M. Sai Baba, S. Vanavaramban, C.K. Mathews
Journal of Nuclear Materials 144(1987)56-64 (impact parameter: 2.447)
55. Studies on Phase-transformation using Mass-spectrometry
R. Viswanathan, **M. Sai Baba**, DDA. Raj, R. Balasubramanian, B. Saha, C.K. Mathews
Phase Transitions 9(1987)86
56. Vaporisation Thermodynamics of the Nickel-rich Phases in the Ni-Te Binary System
– A High Temperature Mass Spectrometric Study
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, B. Saha, C.K. Mathews
Journal of Nuclear Materials 149(1987)302-311 (impact parameter: 2.447)
57. High Temperature Mass-spectrometric Studies of Te(s), FeTe_{0.9}(s)
B. Saha, R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian,
D. Karunasagar, C.K. Mathews
Journal of Nuclear Materials 130(1985)316-325 (impact parameter: 2.447)
58. Oxygen Potential Studies on Hypo-stoichiometric Uranium-Cerium Mixed Oxide
K. Nagarajan, Rita Saha, R.B. Yadav, S. Rajagopalan, K.V.G. Kutty, **M. Sai Baba**,
P.R. Vasudeva Rao, C.K. Mathews
Journal of Nuclear Materials 130(1985)242-249 (impact parameter: 2.447)

List of Conference/Symposium papers (177) – Dr. M. Sai Baba

1. Scenarios of Automatic Information Classification Systems
S. Naseema, N. Madurai Meenachi, G. Krishnamoorthy and **M. Sai Baba**
Proceedings of 11th National Conference on Advances in Information Technology (READIT-2018)
IGCAR, Kalpakkam, August 8-9, 2018, pages 76-78
2. Causal Factor Mining of Publication Data: A Case Study
K. Bharathi Manjula, N. Madurai Meenachi, G. Sivakumar, B. Venkatraman and **M. Sai Baba**
Proceedings of 11th National Conference on Advances in Information Technology (READIT-2018)
IGCAR, Kalpakkam, August 8-9, 2018, pages 183-188
(Best Paper-Oral Presentation)
3. Module for Processing Nomination of Officials from IGCAR to National/International Scientific Programmes: A Repository
S. Sujatha, K. Saipriya, Vidya Sundararajan and **M. Sai Baba**
Proceedings of 11th National Conference on Advances in Information Technology (READIT-2018)
IGCAR, Kalpakkam, August 8-9, 2018, pages 227-230
4. Sprucing the Knowledge Management Portal for Researchers at IGCAR
Jasmine Smila, K. Saipriya, Vidya Sundararajan and **M. Sai Baba**
Proceedings of 11th National Conference on Advances in Information Technology (READIT-2018)
IGCAR, Kalpakkam, August 8-9, 2018, pages 251-252
5. Access to Information Resources: Change, Challenge and Opportunity
M. Sai Baba (Invited Talk)
Best Practices, Services and Challenges for Re-Envisioning
CALIBER 2017, International Conference held at Anna University, Chennai, 3-4 August, 2017
6. Implementation of a Web Based Text Extraction Tool using Open Source Object Models
S Rajeswari and **M Sai Baba**
P16, CALIBER 2017, International Conference held at Anna University, Chennai, 3-4 August, 2017
7. Exploring the Font Attributes of Microsoft Word: A Steganographic Perspective
R. Bala Krishnan, Prasanth Kumar Thandra and **M. Sai Baba**
International Conference on Frontiers in Engineering, Applied Sciences and Technology (FEAST' 17), National Institute of Technology, Tiruchirappalli, March 31 - April 1, 2017
(Best Paper Award)
8. Oxygen Potential Analysis of Molybdenum in MOX Fuel
Ronit Kumar Panda, S. Clement Ravichandar and **M. Sai Baba**
13thDAE-BRNS Nuclear and Radiochemistry Symposium (NUCAR-2017) at KIIT University, Bhubaneswar, February 6-10, 2017 **(Best Poster Award)**
9. Resource Description Capacity of Reference Management Software: A case study
Deepjyoti Kalita and **M. Sai Baba**
SALIS 2016 National Conference on 'Creativity, Innovation and Transformation in Libraries',
KS Rangasamy College of Technology, Tiruchengode, Tamil Nadu on 8th & 9th July, 2016

10. Representing Unstructured Data Using NQSQL: Consistent Hashing Approach using MONGODB
Pabbaraju Chirag Ramdas, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
11. A Survey of Ontology learning from Text for Knowledge Management: Approaches and Tools
Desul Sudarsana and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
12. A Variant of the Particle Swarm Optimization for Ontology Alignment
Tanmaya Shekhar Dabral, N. Madurai Meenachi, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
13. Creeper - An Agent based Semantic Web Crawler
Aniketh Janardhan Reddy, N. Madurai Meenachi, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
14. Semantic Based Personalised Recommender in an Information Retrieval Environment
Kevin Biju, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
15. Automated in House Information Retrieval System for Project Students at IGCAR
M. Kanaga, R. Kabali, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
16. Automated Web Based System for Task Force/High Level Committees at IGCAR
M. Kanaga, J. Jasmine Smila, S. Sujatha, K. Sai Priya, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (**Best Poster Award**)
17. Challenges and Impacts of RFID Technology in Research Library
E. Soundararajan, Sakthi Gandhi and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
18. Data Repositories for Research Organisation
Tanmay `Mondal and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
19. Information Management at MRPU: A Case Study
P. Janupriya, P. P. Muralikannan, Narendra Kumar Kushwaha, Vidya Sundararajan
and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (**Best Paper Award**)

20. Information Repository Management at BARC Training School
M. D. Khaleel, N. Madurai Meenachi, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
21. Integrated Information Retrieval Model for Expenditure Data of DAE
S. Rajeswari and **M. Sai Baba**
National Conference on Recent Advances in Information Technology (READIT),
IGCAR, Kalpakkam, July 13-16, 2016
22. Leveraging Information Technology for Capital Project Monitoring
S. Sridhar, C. Premjith, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
23. Review of Structured Text Retrieval Models
V. Sivasankar, S. Rajeswari and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
24. Single Window Logon and Federated Gateway for Information Retrieval
Renigunta Vinay Datta, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (**Best Paper Award**)
25. Structured Repository for Maintaining Information of Visitors at IGCAR
S. Sujatha, R. Kabali, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
26. A Hybrid Semantic Book Recommender System for Digital Libraries
K. Bharathi Manjula and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
27. Analysis of Server Consolidation Techniques for Virtualized Data Centre
E. Soundararajan, R. Baskaran and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
28. Server Consolidation Algorithms using Live Migration of Virtual Machines
Pathikrit Ghosh, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (**Best Paper Award**)
29. Aggregation and Navigation of Research Literature in Nuclear Science - A Survey
L. Nandha Gopan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016

30. Automating Book Classification System: A Survey
S. Naseema and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
31. Automatic UDC Classification of Library Books
Murali Aniruddhan, E. Soundarajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
32. Bibliometric Analysis using Web of Science: A Case Study of IGCAR Publications
R. Rangarajan, E. Soundararajan, V. Rajendran and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
33. Going beyond Impact Factor: Newer Matrices for Journal Evaluation: A Survey
Deepjyoti Kalita and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
34. Information High Availability Features in 'ATOMS'
S. Premkumar, Narendra Kumar Kushwaha, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
35. Prepress Management System: A Case Study of IGCAR Publications
K. Varathan, GaddamPentiah, K. Ganesan, E. Soundarajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
36. Hierarchical Clustering Algorithms for Online Resources
Amit Agarwal, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016
37. Application of Genetic Algorithm for optimization of fuel management in nuclear reactors
M.L. Jayalal, **M. Sai Baba** and S.A.V. Satya Murty
2016 International Conference on Data Mining and Advanced Computing (SAPIENCE),
Ernakulam, Mar. 16-18, 2016, pp. 325-330
38. Pareto based Ontology Matching for Nuclear Reactor Domain
N. Madurai Meenachi and **M. Sai Baba**
NACLIN 2014, 9-11 December, 2014, Pondicherry
39. Disaster Recovery Management for Digital Libraries
E. Soundararajan, R. Baskaran and **M. Sai Baba**
NACLIN 2014, 9-11 December, 2014, Pondicherry
40. Transforming libraries. Be the change
M. Sai Baba
NACLIN 2014, 9-11 December, 2014, Pondicherry

(Invited Presentation)

41. An Analysis of Semantic Agent for Implementing Library Domain Portal
N. Madurai Meenachi and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), Kolkata, Jan.28-30, 2014
42. Live and On-demand Video Streaming at IGCAR: A Case Study
E. Soundararajan, M.V. Rajasekar, S. Muthu Kumar and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), Kolkata, Jan.28-30, 2014
43. Disaster Recovery Management for Digital Libraries
E. Soundararajan. R. Baskaran and **M. Sai Baba**
17th National Convention on Knowledge Library and Information Networking (NACLIN -2014), Pondicherry, Dec.9-11, 2014
44. Value Added Services with Advanced Digital Library Infrastructure
E. Soundararajan, R. Baskaran, S. Shakthi Gandhi and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), Kolkata, January 28-30, 2014
45. Information Resources at SIRD
M. Sai Baba
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), 28-30 January 2014, VECC, Kolkatta
(Invited Presentation)
46. An Analysis of Semantic Agent for Implementing Library Domain Portal
N. Madurai Meenachi and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), 28-30 January 2014, VECC, Kolkatta
47. Value Added Services with Advanced Digital Library Infrastructure
E. Soundararajan, R. Baskaran, S. Shakthi Gandhi and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), 28-30 January 2014, VECC, Kolkatta
48. Live and On-demand Video Streaming at IGCAR: A Case Study
E. Soundararajan, MV. Rajasekar, S. Muthu Kumar and **M. Sai Baba**
International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), 28-30 January 2014, VECC, Kolkatta
49. Education and Training in Support to Sodium Fast Reactors around the World
Latgé, M. Soucille, C. Grandy, XU MI, R. Garbil, S. Monti, **M. Sai Baba**, P. Chellapandi, T. Kitabata and Y-G Kim
International Conference on Fast Reactors and Related Fuel Cycles: Safe Technologies and Sustainable Scenarios (FR13), 4-7 March 2013, Paris, France
50. A Survey and Analysis of Open Source Tools for Digital Library
E. Soundararajan, M. R. Ramesh and **M. Sai Baba**

51. Digital Resources and Enabling Technologies
M. Sai Baba
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
52. Methodology for Semantic Web Based Domain Knowledge Implementation
N. Madurai Meenachi and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
53. Ontology Based Knowledge Sharing and Ontology Matching Algorithm
N. Madurai Meenachi, and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
54. Virtualized Infrastructure for Data Centers: A Case study of SIRD, IGCAR
R. Baskaran, E. Soundararajan and **M. Sai baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
55. Ontology Based Wiki System for Fast Reactor Domain
L. Nandha Gopan, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
56. Document Preservation through Cyber Security: A Case Study of CCTV based Surveillance at SIRD, IGCAR
M.R. Ramesh, S. Muthukumar, G. Jagannathan, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
57. Virtual Digital Library using Cloud Computing
MV. Rajsekar, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
58. E- Books and Enabling Infrastructure for Digital Libraries
G. Jagannathan, S. Shakthi Gandhi, M. R. Ramesh, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
59. Citation Analysis using Web of Science and Scopus: A Case Study of Publication of IGCAR
A. Rangarajan, V. Rajendran, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
60. Implementation of Libsys Software in SIRD, IGCAR
S. Prabhavathi, N. Madurai Meenachi, E. Soundararajan and **M. Sai Baba**

- 9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
61. RFID Implementation at SIRD,IGCAR: An Experience
KV. Chitra, Leena Mohan, V. Rajendran and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
 62. Knowledge Management Systems Implementation Strategies for Digital Libraries
MD. Khaleel, E. Soundararajan and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
 63. Fault Diagnostics system for Fast Breeder Test Reactor using Case-Based Reasoning
S. Arjun, N. Madurai Meenachi and **M. Sai Baba**
9th Biennial National Conference on Recent Advances in Information Technology (READIT),
18-19 December, 2013, IGCAR, Kalpakkam
 64. Development of Knowledge Management Portal for Research Scholars.
J. Jasmine Smila, K. Saipriya, Dr. Vidya Sundararajan and **Dr. M. Sai Baba**
Conference on Recent Advances in Information Technology (READIT),
December 18-19, 2013, IGCAR, Kalpakkam
 65. Information Ethics in the Domain of Nuclear Data Management
Vidya Soundarajan, K. Saipriya, and **M. Sai Baba**
Conference on Recent Trends in Computer and Networking Technologies,
(Sangoshthi), 21-23 December, 2012, Kalpakkam
 66. Impact of Software Tools - Digital Library
N. Madurai Meenachi, S. Prabavathi, E.Soundarajan and **M. Sai Baba**
Conference on Recent Trends in Computer and Networking Technologies,
(Sangoshthi), 21-23 December, 2012, Kalpakkam
 67. Open Source Tools for Digital Library: A Comprehensive Analysis
E. Soundarajan, M.R. Ramesh, N. Madurai Meenachi and **M. Sai Baba**
Conference on Recent Trends in Computer and Networking Technologies,
(Sangoshthi), 21-23 December, 2012, Kalpakkam
 68. Resource Managers Synchronization in Virtual Digital Library: A case study of SIRD
E. Soundararajan, R. Baskaran and **M. Sai Baba**
Conference on Recent Trends in Computer and Networking Technologies,
(Sangoshthi), 21-23 December, 2012, Kalpakkam
 69. Cloud Computing for Digital Libraries ,
E. Soundararajan, MV. Rajsekar, MD. Khaleel and **M. Sai Baba**
National Conference on E-Infrastructures in Libraries,
21 December, 2012, Coimbatore
 70. Implementing Semantic Search in Library web portal
N. Madurai Meenachi and **M. Sai Baba**

International Conference on Trends in Knowledge and Information Dynamics,
10-13 July, 2012, Bangalore

71. High Temperature Mass Spectrometry
M. Sai Baba (invited talk)
Seminar on Recent Advances of Spectroscopy in Chemistry,
27 February, 2012, Department of Organic Chemistry, BVK College, Visakhapatnam
72. Neutronics Power Estimation of Prototype Fast Breeder Reactor using Artificial Neural Network Model
Subhra Rani Patra, R. Jehadeesan, ML. Jayalal, S. Rajeswari, S.A.V. Satya Murty and **M. Sai Baba**
Recent Researches in Mathematical Methods in Electrical Engineering and Computer Science,
Applied Computing Conference, 2011, (ACC'11)
73. Ontology Based Association Rule Mining For Library Domain
N. Madurai Meenachi and **M. Sai Baba**
8th Biennial National Conference on "Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam
74. Metadata Standards for Resource Discovery in the Networked Environment
S. Prabavathi, E. Soundararajan and **M. Sai Baba**
8th Biennial National Conference on "Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam
75. Corpus Based Domain Specific Ontology Extraction
L. Nandha Gopan, E. Soundararajan and **M. Sai Baba**
8th Biennial National Conference on "Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam (**Best Paper Award**)
76. Building Semantic Digital Library Infrastructure
M. Sai Baba (invited talk)
8th Biennial National Conference on Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam
77. Ontology Mining Algorithms Analysis for an Information Retrieval, Environment
R. Vinothini, E. Soundararajan and **M. Sai Baba**
8th Biennial National Conference on "Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam
78. Advanced Digital Library Infrastructure
K. Anand, R. Baskaran, E. Soundararajan and **M. Sai Baba**
8th Biennial National Conference on Recent Advances in Information Technology READIT- 2011,
28-29 December, 2011, Kalpakkam
79. Semantic Digital Library - Migration of Dublin Core to RDF
E. Soundararajan, N. Madurai Meenachi and **M. Sai Baba**
Presented at IEEE International Conference on Signals and Image Processing,
RMD Engineering College, 15-17 December. 2010, Chennai, 250–254
80. A Novel Conductometric Titration Technique for Determination of Rate Constant Using Pulsating Sensor

K. Das, P. Sahoo, **M. Sai Baba**, N. Murali and P. Swaminathan

ELAC 2010, page 128-131

Fourth ISEAC Triennial International Conference on ElectroAnalytical Chemistry and Allied Topics March 16 – 18, 2010 Toshali Sands, Puri, Orissa

Editors: Suresh K. Aggarwal and Saurav K. Guin

The paper was adjudged as the **best poster (2nd position)**

81. Studies on Oscillating Chemical Reaction at Elevated Temperature Using Pulsating Sensor
K. Das, P. Sahoo, **M. Sai Baba**, N. Murali, and P. Swaminathan
Fourth ISEAC Triennial International Conference on ElectroAnalytical Chemistry and Allied Topics March 16 – 18, 2010 Toshali Sands, Puri, Orissa
Editors: Suresh K. Aggarwal and Saurav K. Guin
82. Laser-assisted Surface Boronizing of Type 304L Stainless Steel and Characterization of the Boronized Layer
Pinaki Paul, RakeshKaul, C.P. Paul, S.K. Mishra, C.H. Premsingh, PragyaTiwari, R.V. Subba Rao, **M. Sai Baba**, L.M. Kukreja and R.K. Dayal
Workshop on Application of Lasers in Mechanical Industries and Seminar on Application of Laser in Materials Processing (WALMI 2010), 7-9 January, 2010, Jadavpur University, Kolkata
83. HRD Initiatives to Realize the Mission Programmes of Indira Gandhi Centre for Atomic Research
Baldev Raj, **M. Sai Baba**, Vidya Sundararajan, R.Srikanthan, JalajaMadanmohan and G.Venugopal Rao
International Conference on Peaceful Uses of Atomic Energy-2009, October 2009, New Delhi
84. Bringing Equity with Neighbourhood: our Approach
Baldev Raj, Prabhat Kumar and **M. Sai Baba**
International Conference on Millennium Development Goals (MDG), RMK Engineering College, 27 December, 2009(115), Kavaraipeitai
85. Building Scientific Archival Database system through Open Source solutions
E. Soundararajan and **M. Sai Baba**
Specialists Meeting on Advances in Scientific Databases in India (SMASD) Convention Center, Anupuram, August 10-11,2009, Kalpakkam
86. Digital Library Infrastructure Development: Issues & Methods
E. Soundararajan and **M. Sai Baba**
7thNational Conference on Recent Advances in Information Science and Technology, IGCAR, 29 - 30 December, 2009, Kalpakkam
87. Knowledge Management and Ontology Representation for Fast Breeder Test Reactor
N. Madurai Meenachi, **M. Sai Baba**, B. Babu, B. Anandapadmanaban and V. Ramanathan
7th National Conference on Recent Advances in Information Science and Technology, 29-30 December, 2009, Kalpakkam
88. Knowledge Management Security for Nuclear Reactor
N. Madurai Meenachi, **M. Sai Baba**, B. Babu, B. Anandapadmanaban and V. Ramanathan, eINDIA 2009, Hyderabad, 25-27 August 2009

89. Synthesis and Characterization of Iron Based Boride Coating on SS 316 LN Substrate by Laser Surface Cladding,
Pinaki Paul, C.P. Paul, S. K. Mishra, C. H. Premsingh, RakeshKaul, R. V.Subba Rao, **M. Sai Baba**,
L.M. Kukreja and R.K. Dayal
23rd International Conference on Surface Modification Technologies, (SMT 23)
2-5 November, 2009, Mamallapuram

90. Intelligent Agents for Nuclear Domain
D. Persis, N. Madurai Meenachi and **M. Sai Baba**
7th National Conference on Recent Advances in Information Science and Technology,
29-30 December, 2009, Kalpakkam

91. Knowledge Management practices in higher education
M. Sai Baba
(Sangoshti 2008), IGCAR, Kalpakkam (invited presentation)

92. Advanced Digital Libraries: challenges & some solutions
E. Soundararajan and **M. Sai Baba**
Role of IT - Enabled Knowledge management in growth of India,
(Sangoshti 2008), 24-26, Jul 2008, Kalpakkam

93. Collection Development and Organisation of Digital Resources With a Special Reference to Reports Collection
K. Varathan, E. Soundararajan, A. Narayanan, and **M. Sai Baba**
Role of IT - Enabled Knowledge management in growth of India,
(Sangoshti 2008), 24-26 July, 2008, Kalpakkam

94. Need of Knowledge Management in Government Organisations
JVM. Joseph and **M. Sai Baba**
Role of IT - Enabled Knowledge management in growth of India,
(Sangoshti 2008), 24-26 July, 2008 Kalpakkam

95. Radiochemical Examination on Irradiated PHWR and FBTR Fuels
M.P. Antony, R. Balasubramanian, S. Nalini, D. Darwin Albert Raj, **M. Sai Baba**,
R. Viswanathan, N. Sivaraman, S. Subramanian, K.V. Syamala, R. Manivannan,
S. Rajeswari, TG. Srinivasan, and P.R. Vasudeva Rao
Theme meeting on Recent advances in Post – Irradiation Examination (RAP-2008),
22-24 May, 2008, IGCAR, Kalpakkam

96. Mass Spectrometric Study of Vaporization Associated with Condensed Phase Transitions and Information on Phase diagram
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan,
CALPHAD XXXVI, 6 -11 May 2007, State College, Pennsylvania, USA

97. Vaporisation Thermodynamic Studies by High Temperature Mass Spectrometry on Some Three-phase Regions over MnO-TeO₂ Binary line in the Mn-Te-O system
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
Gordon Research Conference (GRC) on High temperature materials, processing, and diagnostics,
16 - 21 July 2006, Waterville, Maine, USA

98. Link between Vaporisation Chemistry and Condensed Phase Chemistry some Observations from Mass Spectrometric Study of Mn-Te, Mn-Te-O Systems
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
10th ISMAS Triennial International Symposium on Mass Spectrometry,
January 28- February 1, 2006, Munnar, India
99. Thermodynamic Stability of Mn₆Te₅O₁₆(s) from High Temperature Mass Spectrometric Studies over the Phase Field MnO(s) + Mn₃O₄(s) + Mn₆Te₅O₁₆(s)
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
10th ISMAS Triennial International Symposium on Mass Spectrometry,
January 28- February 1, 2006, Munnar, India
The paper was adjudged as the **best paper** in the “Inorganic Chemistry Section”
100. High Temperature Mass Spectrometry Study of the Equilibrium:
TeO₂(g) + (1/2)Te₂(g) = 2TeO(g) Enthalpy of formation of TeO(g)
M. Sai Baba, T.S. Lakshmi Narasimhan and R. Viswanathan
10th ISMAS Triennial International Symposium on Mass Spectrometry,
January 28- February 1, 2006, Munnar, India
101. Thermal Ionisation Mass Spectrometric Investigations on an FBTR Fuel Pellet Discharged at 100 GWd/t
R. Balasubramanian, N. Sivaraman, S. Subramanian, **M. Sai Baba** and R. Viswanathan
Proceedings of NUCAR 2005, 15-18 March, 2005, Amritsar
Paper RA-7, page 389-390.
102. Fission Gas Analysis from (U_{0.3}Pu_{0.7})C Fuel Pins Irradiated at FBTR
G.G.S. Subramanian, R. Vidhya, R. Manivannan, M.P. Antony, R. Balasubramanian,
D. Darwin Albert Raj, **M. Sai Baba**, R. Viswanathan and P.R. Vasudeva Rao
Paper presented at the meeting on “High Burn-up issues in Nuclear Fuels
(HBINF-2005), 1st theme meeting on Fission Gas Release in Nuclear Fuels, 16 March, 2005,
BARC, Mumbai
103. Thermochemical Analysis Pertinent to Fuel-clad Chemical Interactions in Mixed-Oxide Fuelled Fast Breeder Reactors: Binary and Ternary Equilibria involving the Fission Product Tellurium
M. Sai Baba, T.S. Lakshmi Narasimhan and R. Viswanathan
2ndTheme Meeting on Cladding Corrosion, Embrittlement and PCI,
17 October, 2005, BARC, Mumbai
104. High Burn-up Issues in Fast Breeder Reactor Fuels and Structural Materials
Baldev Raj, S.L. Mannan, K.V. Kasi Viswanathan, M.D. Mathews, **M. Sai Baba**
and P. Puthiyavinayagam
Paper presented at the meeting on “High Burn-up issues in Nuclear Fuels (HBINF-2005),
1st theme meeting on Fission Gas Release in Nuclear Fuels, 16 March, 2005, BARC, Mumbai
105. Chemical State of the Fission Products at High Burn-ups in Irradiated Mixed Carbide Fuel with High Plutonium Content and its Implication on Fuel-clad Interaction
M. Sai Baba, R. Vidhya and P. R. Vasudeva Rao
2ndTheme Meeting on Cladding Corrosion, Embrittlement and PCI,
17 October, 2005, BARC, Mumbai

106. Fuel-Clad Chemical Interaction Issues in Fast Reactors
P. R. Vasudeva Rao, R. Viswanathan, **M. Sai Baba** and R. Vidhya
2nd Theme Meeting on Cladding Corrosion, Embrittlement and PCI,
17 October, 2005, BARC, Mumbai
107. Mass Spectrometric Studies on Irradiated (U,Pu) Mixed Carbide Fuel of FBTR
R. Balasubramanian, D. Darwin Albert Raj, S. Nalini and **M. Sai Baba**
14th Annual Conference of Indian Nuclear Society and 1st BRNS conference on Nuclear Fuel Cycle,
2004, IGCAR. Kalpakkam
108. An unusual Type of Univariant Three-phase Vaporisation Equilibrium in the Ternary System
Mn-Te-O
T.S. Lakshmi Narasimhan, R. Viswanathan and **M. Sai Baba**
International IUPAC Conference on High Temperature Materials Chemistry-XI,
19-23 May, 2003, Tokyo, Japan
109. Measurement of Equilibrium Carbon Monoxide Pressures over Al₂O₃-C-Al₄C₃ by Transpiration
Method
M. Sai Baba, S. Nalini and R. Vidhya
International IUPAC Conference on High Temperature Materials Chemistry-XI,
19-23 May 2003, Tokyo, Japan
110. High Temperature Mass Spectrometric Studies on Ni-Te-O system: Studies over the Phase Field
NiO(s)+Ni₂Te₃O₈(s)
M. Sai Baba, S. Nalini and T.S. Lakshmi Narasimhan
Proceedings of "ISMAS Silver Jubilee Symposium on Mass Spectrometry",
27-31 January, 2003, NIO, Goa, Vol II, pp754-756.
111. Quasi Congruent Vaporisation along the MnTeO₃-Mn₃TeO₆ Binary Line: a High Temperature Mass
Spectrometric Study of (MnO)_{0.5}(TeO₂)_{0.5}
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
Gordon Research Conference (GRC) on High temperature materials, processing, and diagnostics,
August 2002, USA
112. Measurement of Vapour Pressures by TG-based Transpiration Method
M. Sai Baba and S. Nalini
Proceedings on the "Thirteenth National Symposium on Thermal Analysis" (THERMANS 2002)
Eds. C.G.S. Pillai, K.L. Ramkumar, P.V. Ravindran and
V. Venugopal, Page 210-212.
Adjudged **Best Paper Poster presentation (second place)**
113. Phase Diagram Studies on Mn-Te-O system
T.S. Lakshmi Narasimhan, **M. Sai Baba**, S. Nalini and R. Viswanathan
Proceedings on the "Thirteenth National Symposium on Thermal Analysis" (THERMANS 2002)
Eds. C.G.S. Pillai, K.L. Ramkumar, P.V. Ravindran and
V. Venugopal, Page 221-222,
Adjudged **Best Paper Oral presentation (Third place)**
114. Application of Thermal Ionisation Mass Spectrometry for the Determination of Isotopic
Abundance and Concentration of Elements
M. Sai Baba

10th ISMAS Workshop on Mass Spectrometry”, 25th February to 1st March, 2002, Institute of Physics, Bhubaneswar

115. Vaporisation Thermodynamic Study of the (Mn+Te) System by Knudsen Effusion Mass Spectrometry
T.S. Lakshmi Narasimhan, R. Balasubramanian, **M. Sai Baba**, and R. Viswanathan
16th IUPAC Conference including International conference on Chemical Thermodynamics (ICCT 2000) and International Symposium on Thermodynamics of Nuclear Materials (STNM 10), 6-11 August, 2000, at Dalhousie University, Halifax, Nova Scotia, Canada, page 144
116. Vaporisation Studies on {x (MnO) + (1-x) TeO₂} by High Temperature Mass Spectrometry
T.S. Lakshmi Narasimhan, R. Viswanathan and **M. Sai Baba**
16th IUPAC Conference including International conference on Chemical Thermodynamics (ICCT 2000) and International Symposium on Thermodynamics of Nuclear Materials (STNM 10), 6-11 August, 2000, at Dalhousie University, Halifax, Nova Scotia, Canada, Page 150
117. Mass Spectrometric Study of Vaporisation Behavior of (MnO)_{0.5}(TeO₂)_{0.5}
T.S. Lakshmi Narasimhan, R. Viswanathan and **M. Sai Baba**
Gordon Research Conference (GRC) on “High Temperature Materials, Processing, and Diagnostics”, 23-28 July, 2000 at Plymouth State College, Plymouth, NH, USA
118. Vaporisation Behaviour of Alumina
T. Markos, **M. Sai Baba** and K. Hilpert
Gordon Research Conference (GRC) on “High Temperature Materials, Processing, and Diagnostics”, 23-28 July, 2000 at Plymouth State College, Plymouth, NH, USA
119. Vaporisation and Phase Diagram Studies on Mn-Te-O system
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
10th IUPAC conference on High Temperature Chemistry, held at Research Centre, Julich, Germany, April 10-14, 2000., paper A23
120. Application of Mass Spectrometry in the High Temperature Chemistry Research
M. Sai Baba
“9th ISMAS Workshop on Mass Spectrometry”, 12-16 December, 2000, National Institute of Oceanography, Dona Paula, Goa, Page 83-87
121. Vaporisation Studies on TeO₂ (s)
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
p 712-715, "8th ISMAS Symposium on Mass Spectrometry", held at IICT, Hyderabad, December 7-9, 1999.
(Adjudged **First place** in the **Inorganic Chemistry and Thermodynamics** Session)
122. Dissociation Equilibrium (TeO)₂(g) = 2 TeO(g): A Knudsen Effusion Mass Spectrometric Study
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
8th ISMAS Symposium on Mass Spectrometry, 7-9 December, 1999,
IICT, Hyderabad, Page 716-718
123. Mass Spectrometric Studies on Mn-Te-O System
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
8th ISMAS Symposium on Mass Spectrometry, 7-9 December, 1999,

124. Thermal Ionisation Mass Spectrometric Studies on Fission Product Neodymium from a Spent MAPS Fuel Solution
R. Balasubramanian, S. Nalini, N. Sivaraman and **M. Sai Baba**
8th ISMAS Symposium on Mass Spectrometry, 7-9 December, 1999,
IICT, Hyderabad, Page 844-846
125. Mass Spectrometric Study of Uranium-Plutonium Mixed Carbide Spent Fuel Solution
S. Nalini, R. Balasubramanian, **M. Sai Baba**, D. Darwin Albert Raj and
R. Viswanathan
8th ISMAS Symposium on Mass Spectrometry, 7-9 December, 1999,
IICT, Hyderabad, Page 851-853
Adjudged **First place** in the **Nuclear Technology** Session.
126. Mass Spectrometric Determination of Burn-up of a Spent Fuel Pin from the
Mixed-oxide Fuelled Fast Breeder Test Reactor
R. Balasubramanian, S. Nalini, **M. Sai Baba**, D. Darwin Albert Raj and
R. Viswanathan
Nuclear and Radiochemistry Symposium (NUCAR 99), 19-22 January, 1999,
BARC, Mumbai, Page 389
127. Optimisation of Ion Exchange Procedure for the Separation of Nd,U and Pu in a Spent Reactor
Fuel Solution
R. Balasubramanian, S. Nalini and **M. Sai Baba**
17th Conference of Indian Convention of Chemists, University of Madras,
26-28 November, 1998, Page 134
128. Thermochemistry of Small Germanium Clusters
M. Sai Baba, R.W. Schmude, Jr., J.E. Kingcade, Jr. and K.A. Gingerich
Graduate Research in Chemistry Symposium, Department of Chemistry, Texas A&M University,
College Station, Texas, USA, September 29-30, 1997
129. Thermochemistry of Small Germanium Clusters
I. Shim, **M. Sai Baba** and K.A. Gingerich
Gorden Conference on Clusters, New Hampshire, USA, July 1997
130. High Temperature Mass Spectrometric Studies of Molecules Containing Boron, Silicon and
Nitrogen
M. Sai Baba, R. Viswanathan and K.A. Gingerich
Proceedings of Ninth International Conference on High Temperature Materials Chemistry, 19-23
May, 1997, Pennsylvania, USA
131. Atomisation Enthalpies of Silicon Carbide Clusters from High Temperature Mass Spectrometry
K.A. Gingerich, R.W. Schmude, Jr. and **M. Sai Baba**
Proceedings of Ninth International Conference on High Temperature Materials Chemistry, 19-23
May, 1997, Pennsylvania, USA
132. Knudsen cell mass spectrometric studies on TeO₂(s)
T.S. Lakshmi Narasimhan, R. Balasubramanian, S. Nalini and **M. Sai Baba**
7th National Symposium on Mass Spectrometry, Defence Research and Development

133. Preparation and Calibration of ^{233}U spike for IDMS of Uranium
R. Balasubramanian, S. Nalini, **M. Sai Baba**, K.N. Sabharwal, A. Suresh and T.G. Srinivasan
7th National Symposium on Mass Spectrometry, Defence Research and Development
Establishment, 26-28 November, 1996, Gwalior, India, Page 585-590
134. Vaporisation Behaviour of Mn-Te alloys: A High Temperature Mass Spectrometric Study
T.S. Lakshmi Narasimhan, R. Balasubramanian and **M. Sai Baba**
7th Annual General Meeting of Materials Research Society of India, 1-3 February, 1996, Indian
Institute of Science, Bangalore, India, Page 44
135. Application of Knudsen Effusion Mass Spectrometry for the Thermodynamic Characterisation of
Non Stoichiometric Phases
M. Sai Baba, T.S. Lakshmi Narasimhan and R. Balasubramanian
7th Annual General Meeting of Materials Research Society of India, February 1-3, 1996, Indian
Institute of Science, Bangalore, India, page 75,
136. Vaporisation Behaviour of Tellurium Dioxide: A Knudsen Effusion Mass Spectrometric Study
T.S. Lakshmi Narasimhan, R. Balasubramanian, S. Nalini and **M. Sai Baba**
14th IUPAC Conference in Chemical Thermodynamics, ICCT-96,
August 1996, Osaka, Japan, Page 285
137. Application of Knudsen Effusion Mass Spectrometry for the Determination of Thermodynamic
Stabilities of Condensed Phases and Gaseous Molecules
M. Sai Baba and K.A. Gingerich
Graduate Research in Chemistry Symposium, Department of Chemistry, Texas A&M University,
College Station, Texas, USA, September 30- October 1, 1996, Page 38
138. Application of High Temperature Mass Spectrometry for The Thermodynamic Charactersiation
of Non Stoichiometric Metal Telluride Phases.
T.S. Lakshmi Narasimhan, R. Balasubramanian, **M. Sai Baba** and R. Viswanathan
International conference on "Advances in Thermochemistry and Ferrous Metallurgy", 14-16
October, 1996, Banaras Hindu University, Varanasi, India
139. High Temperature Mass Spectrometry
M. Sai Baba
In: Lecture notes of the workshop on "Advances in Mass Spectrometry: Instrumentation &
Applications", August 1995, Trivandrum, India, L11, pages 1-9.
140. Mass Spectrometry of Fullerenes,
M. Sai Baba
In: Lecture notes of the workshop on "Advances in Mass Spectrometry: Instrumentation &
Applications", August 1995, Trivandrum, India, L8, pages 1-4.
141. Application of Thermal Ionisation Mass Spectrometry for the Quantitative Estimation of Rare
Earth Elements.
R. Balasubramanian, S. Nalini and **M. Sai Baba**
Fourteenth Annual Conference of Indian Council of Chemists,

December 1995, Bombay, India, Pages 2-3.

142. High Temperature Mass Spectrometry: A Powerful Tool for the Determination of Thermodynamic Properties.
T.S. Lakshmi Narasimhan, R. Balasubramanian and **M. Sai Baba**
Chemists' Meet 95 at Madras, India, December 1995, OP13.
143. Thermal Ionisation Mass Spectrometry: An Effective Tool for the Determination of Isotopic Abundance and Quantitative Estimation of Elements.
R. Balasubramanian, S. Nalini and **M. Sai Baba**
Chemists' Meet 95, December 1995, Madras, India, Page 21
144. Knudsen Effusion Mass Spectrometric Studies on Fullerenes
M. Sai Baba, T.S. Lakshmi Narasimhan and R. Balasubramanian
Chemists' Meet 95, December 1995, Madras, India, Page 22
145. Applications of Mass Spectrometry in Physical and Analytical Chemistry
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and S. Nalini
National Seminar on Chemical Education and Research, November 1995, at Madras, India I&A 5.
Adjudged as **Best paper (First place)** in the **"Inorganic, Analytical and General Chemistry"** section
146. Fullerenes: An Exciting Area of Chemical Research
T.G. Srinivasan, **M. Sai Baba**, N. Sivaraman T.S. Lakshmi Narasimhan, I. Kaliappan,
R. Balasubramanian, R. Dhamodaran and P.R. Vasudeva Rao
National Seminar on Chemical Education and Research, at Madras, India, November 1995, OA-5.
147. Chemistry at IGCAR in 2020
P.R. Vasudeva Rao, T. Gnanasekaran, P. Srirama Murti, **M. Sai Baba** and K.S. Viswanathan
Vision 2020, June 1995, Bombay, India
148. Mass Spectrometric Studies on Fullerenes
M. Sai Baba
Bulletin of the Indian Society for Mass Spectrometry
January-April 1995, 42-46
149. Research and Development Activities Based on Mass Spectrometry in the Chemical Group of IGCAR
M. Sai Baba
Bulletin of the Indian Society for Mass Spectrometry
January-April 1995, 33-41.
150. Thermodynamics of Fullerenes
CK. Mathews, **M. Sai Baba** and T.S. Lakshmi Narasimhan
Proceedings - Electrochemical Society (1994), 94-24 (Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials)
151. Electron Impact Fragmentation of C₆₀
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and C.K. Mathews

152. Determination of C₆₀-C₇₀ Binary Phase diagram
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, N. Sivaraman and C.K. Mathews
6th National Symposium on Mass Spectrometry, October 1993, Dehra Dun, India
153. Partial Pressures of C₆₀ and C₇₀ over Fullerite
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, P.R. Vasudeva Rao and C.K. Mathews
Sixth National Symposium on Mass Spectrometry, October 1993, Dehra Dun, India
154. Mass Spectrometric Studies on the Phase Diagram of K-C₆₀ Binary System
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, V. Ganesan, K. Chandran, P. R. Vasudeva Rao and C.K. Mathews
Sixth National Symposium on Mass Spectrometry, October 1993, Dehra Dun, India Page 325-326
155. Electron Impact Ionisation Cross Section of C₆₀ as a Function of Electron Energy
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and C.K. Mathews
Sixth National Symposium on Mass Spectrometry, October 1993, Dehra Dun, India
156. Thermo-Chemistry of Metal-rich Manganese-Telluride and its Role in Fuel-Clad interaction
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, D. Darwin Albert, R. Viswanathan and C.K. Mathews
Thermodynamics of Nuclear Materials 8 Symposium, at Utah, USA, August 1992
157. Thermodynamic Study of Ni-Al-Hf System
M. Alders, **M. Sai Baba**, D. Kath, M. Miller and K. Hilpert
Gordon Conference on High Temperature Chemistry, at New Hampshire, USA, June 1992.
158. High Temperature Mass Spectrometric Study of Ni-Al-Hf System
M. Alders, **M. Sai Baba**, D. Kath, M. Miller and K. Hilpert
Bunsen Tagen-Physikalisches Chemie Symposium, at Vienna, Austria, May 1992
159. A High Temperature Mass Spectrometric Study of Vaporisation of Mn-rich Manganese Telluride
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian, D. Darwin Albert and C.K. Mathews
12th International Mass Spectrometry Conference, at Amsterdam, The Netherlands, August 1991
160. Characterisation and Thermodynamic Properties of Te-Rich Phases in Cr-Te system: A High Temperature Mass Spectrometric Study
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, T.S. Lakshmi Narasimhan, and C.K. Mathews
International Symposium on Calorimetry and Chemical Thermodynamics, (IUPAC), at Moscow, USSR, June 1991, 23-24
161. High Temperature Mass Spectrometric Studies on Non-stoichiometric Metal Tellurides,
R. Viswanathan, **M. Sai Baba**, R. Balasubramanian, D. Darwin Albert, T.S. Lakshmi Narasimhan and C.K. Mathews
International Conference on Advances in Chemical metallurgy,
January 1991, BARC, Bombay, India, 73-74.

162. Knudsen Cell Mass Spectrometric Studies of Cr-Te Alloys
R. Viswanathan, **M. Sai Baba**, R. Balasubramanian, D. Darwin Albert, T.S. Lakshmi Narasimhan and C.K. Mathews
Fifth National Symposium on Mass Spectrometry, January 1991, Ahmedabad, India
ICT-5/1-ICT-5/3.
163. High Temperature Mass Spectrometric Studies of Manganese Tellurides
M. Sai Baba, R. Viswanathan, T.S. Lakshmi Narasimhan, R. Balasubramanian,
D. Darwin Albert Raj and C.K. Mathews
Fifth National Symposium on Mass Spectrometry, January 1991, Ahmedabad, India
ICT-6/1-ICT-6/2.
164. NaI- Scl_3 System: Complexation and Chemical Vapour Deposition
K. Hilpert, M. Miller and **M. Sai Baba**
Fifth International Symposium on the Science & Technology of light sources, at York, England,
September 1989
165. Chemical Vapour Transport and Complexation in the NaI- Scl_3 System
K. Hilpert, M. Miller and **M. Sai Baba**
Sixth International Conference on High Temperature-Chemistry of Inorganic Materials, at
Gaithersburg, Maryland, USA, April 1989
166. Characterisation of Non-stoichiometric Iron Telluride by High Temperature Mass Spectrometry
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, B. Saha and C.K. Mathews
Fourth National Symposium on Mass Spectrometry, January 1988, Bangalore, India
ICT1/1-ICT1/4
167. Determination of Dissociation Constant of Diatomic Tellurium Molecule
M. Sai Baba, R. Viswanathan, D. Darwin Albert, R. Balasubramanian, B. Saha and C.K. Mathews
Fourth National Symposium on Mass Spectrometry, January 1988, Bangalore, India,
ICT2/1-ICT2/4
168. Gibbs Energy of Formation of NaCrO_2 by High Temperature Mass Spectrometry
T. Gnanasekaran, R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian
and C.K. Mathews
Fourth National Symposium on Mass Spectrometry, January 1988, Bangalore, India
ICT3/1-ICT3/4
169. Thermo Chemistry and Phase Relationships in M-Te (M=Fe,Cr& Ni) Systems of Relevance to
Fuel-Clad Interaction in Fast Reactors- A High Temperature Mass Spectrometric Study
B. Saha, R. Viswanathan, **M. Sai Baba** and C.K. Mathews
Fifth International Conference on High Temperature and Energy-Related Materials (IUPAC
conference), at Rome, Italy, May 1987, D2(1-2)
170. Studies on Phase Transformation Using Mass Spectrometry
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert Raj, R. Balasubramanian, B. Saha
and C.K. Mathews
Proceedings of the Solid State Physics Symposium (Pant Nagar) 29 C, December 1986
171. Effect of Oxygen and Nitrogen Impurities on the Performance of the Mixed Carbide Fuel
M. Sai Baba and C.K. Mathews

A Study Based on Thermodynamic Calculations Seminar on Fast Reactor Fuel Cycle,
February 1986, Kalpakkam, India

172. A Study of Selenium and Tellurium Clusters using High Temperature Mass Spectrometry
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian and C.K. Mathews
3rd National Symposium on Mass Spectrometry, September 1985, Hyderabad, India
A-7/1-4
173. A High Temperature Mass spectrometric Study of Chromium-Tellurium Alloys
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian and C.K. Mathews
3rd National Symposium on Mass Spectrometry, September 1985, Hyderabad, India,
A-8/1-4
174. A High Temperature Mass Spectrometric Study of Iron-Tellurium Binary System
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian and C.K. Mathews
3rd National Symposium on Mass Spectrometry, September 1985, Hyderabad, India
PA-9/1-4.
175. Oxygen Potential Studies on Hypostoichiometric Uranium-cerium Mixed Oxide.
K. Nagarajan, R. Saha, R. B. Yadav, S. Rajagopalan, K.V.G. Kutty, **M. Sai Baba**, P.R. Vasudeva Rao
and C.K. Mathews
Sixth Symposium on Thermodynamics of Nuclear Materials MC Master University, Hamilton,
Ontario, Canada, 13-17August, 1984
176. High-temperature Mass-spectrometric Studies of Te(s) and FeTe_{0.9}(s)
B. Saha, R. Viswanathan, **M. Sai Baba**, DDA. Raj, R. Balasubramanian, D. Karunasagar
and CK. Mathews
Sixth Symposium on Thermodynamics of Nuclear Materials MC Master University, Hamilton,
Ontario, Canada, 13-17August, 1984
177. Study of Vaporisation of Fe-Te System by High Temperature Mass Spectrometry
B. Saha, R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, D. Karunasagar
and C.K. Mathews
IX Annual Convention of Chemists, March 1984, Madras, India

Confidential Reports (4)

1. Some chemical aspects of FBTR fuel at 1,00,000 MWD/t burn-up and potential to go to higher burn-ups
M. Sai Baba, R. Vidhya and P.R. Vasudeva Rao
Confidential report (IGC/CG/FChD/20/2003)
2. C/M of the FBTR carbide fuel at 125 GWd/t burn-up and potential to go to higher burn-ups
R. Vidhya, **M. Sai Baba** and P.R. Vasudeva Rao
Confidential report (IGC/CG/FChD/33/2004)
3. The effect of C/M on allowable LHR of MK-I fuel beyond a burn-up of 125 GWd/t
Clement Ravichandar, P. Puthiyavinayagam, D. Ghosh, **M. Sai Baba**, R. Vidhya,
G. Srinivasan, P. Chellapandi, P.V. Ramalingam and P.R. Vasudeva Rao
Confidential Report (ROD/FBTR/S-RS-2/31400/TN-541)
4. Evolution of C/M as a function of burn-up and its implication on the fuel performance
R. Vidya, **M. Sai Baba**, P.R. Vasudeva Rao
Confidential Report No. CG/41/2005

Articles in the Books (7)

1. Technical Education and Human Resource Development in the Indian Nuclear Program with Focus on Indira Gandhi Centre for Atomic Research
Baldev Raj, **M. Sai Baba** and Vidya Sundararajan
Pages: 203-215
In the book "XXI Century Priorities in Engineering Education"
Editors: R. Natarajan and M. Anandkrishnan
Indian Society for Technical Education (ISTE), New Delhi, Macmillan Publisher, 2010
2. Knudsen Effusion Mass Spectrometry
M. Sai Baba
In the book "Introduction to Mass Spectrometry",
Editors: S.K. Aggarwal, H.C. Jain, Indian Society of Mass Spectrometry, Bombay, India, 1997,
Pages: 429-464
3. Mass Spectrometric Studies on Fullerenes
M. Sai Baba
Bulletin of the Indian Society for Mass Spectrometry, January-April 1995, Pages:42-46
4. Research and Development Activities Based on Mass Spectrometry in the Chemical Group of IGCAR,
M. Sai Baba
Bulletin of the Indian Society for Mass Spectrometry, January-April 1995, Pages:33-41
5. Thermodynamics of Fullerenes.
C.K. Mathews, **M. Sai Baba** and T.S. Lakshmi Narasimhan
In: Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials, 1993, 459- 475.
Editors: Kadish, K.M., and Ruoff, R.S. (The Electrochemical Society Inc., New Jersey, USA),
6. A Study of Chromium -Tellurium System Using High Temperature Mass Spectrometry
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian, B. Saha and C.K. Mathews
In: Advances in Mass Spectrometry, 11, 1132. 1989
Ed. P. Longevialle, (Heyden& Son.)
7. A High Temperature Mass Spectrometric Study of Tellurium and Selenium Clusters
R. Viswanathan, **M. Sai Baba**, D. Darwin Albert, R. Balasubramanian and C.K. Mathews
In: Advances in Mass Spectrometry, 10, 1087-1088, 1985
Ed. J.F.J. Todd, John Wiley & Sons,

Books and periodicals Edited (7)

1. Fast Breeder Test Reactor, An Exciting Journey through a New Technology **2011**,
Member of the Editorial Committee
Edited by: G. Srinivasan, K.V. Suresh Kumar, B. Ananthapadmanaban, B. Babu,
B.S. Panigrahi, M.S. Chandrasekar, Pankaj Mehta and **M. Sai Baba**
2. Radiometallurgy Laboratory 25 Years Down the Lane **2011**,
Member of the Editorial Committee
Edited by: K.V. Kasiviswanathan, T. Jayakumar, C. Babu Rao, Jojo Joseph,
B.P.C. Rao, S. Murugan, T. Johny, C.N. Venkiteswaran, V. Karthik, C. Rajagopalan and **M. Sai Baba**
3. High Impact Breakthroughs **2008-10**
Edited by: **M. Sai Baba**, Saroja Saibaba, Vidya Sundararajan,
T.S. LakshmiNarasimhan, N. Subramanian and S. Varadarajan
4. Applications of Mass Spectrometry in Nuclear Fuel Cycle, **2008**
Edited by: P.R. Vasudeva Rao, **M. Sai Baba**, Vidya Sundararajan and R. Balasubramanian
5. High Impact Breakthroughs **2004-07**
Edited by: **M. Sai Baba** and Vidya Sundararajan
6. Annual Report of Indira Gandhi Centre for Atomic Research
Nine years from 2008 to 2016
M. Sai Baba
Member of Editorial Committee and Chairman of the Editorial Committee (2015 and 2016)
7. IGC News Letter (quarterly publication of IGCAR)
Volume **77 to 113**, **2008-July, 2107**, 37 Issues
M. Sai Baba
Chairman of the Editorial Committee

Invited Talks given by Dr. M. Sai Baba (85)

- 1. Contemporary Science Literature: An assessment**
M. Sai Baba
Member of the Panel Discussion
India International Science Festival (IISF), Science Communication for Transforming India,
Lucknow, 6-8 October, 2018
- 2. Importance of Science Communication for the Development of the Society**
M. Sai Baba
Dialogue with the Scientist-Communicators,
at Workshop organised by Swissnex India, Consulate General of Switzerland and NIAS,
28th September 2018.
- 3. Opportunities in Science and in Science Journalism: Where are the jobs, the students and the teachers?**
M. Sai Baba
Member of the panel discussion
at “Science, Journalism, Media, Communicating Science in a Changing India”
20-21, August, 2018, jointly organised by Institute of Mathematical Science, Chennai
(jointly organised by IMSc and Indian Academy of Science)
- 4. How to be effective: Self-Motivation for enhanced performance**
M. Sai Baba
Talk delivered to the Trainee Scientific Officers of BARC Training School at IGCAR.
10th August, 2018, IGCAR, Kalpakkam
- 5. Transition from Information Resource Centers to Knowledge Houses: Saraswati learning to Playing Digital Veena**
M. Sai Baba
11th National Conference on “Recent Advances in Information Technology” held at IGCAR,
Kalpakkam, 9th August, 2018
- 6. Access to Information Resources in the Digital Era: Change, Opportunity and Challenges**
M. Sai Baba
International Conference on “Exploring the Horizons of Library and Information Sciences: From
Libraries to Knowledge Hubs”, 7-9 August 2018, DRTC, ISI Bengaluru Campus
- 7. Appreciation of Chemical Sciences**
M. Sai Baba
Talk delivered at GITAM Institute of Science, GITAM University, Visakhapatnam
19th July, 2018
- 8. Access to Information in the Digital Era**
M. Sai Baba
Talk delivered at Knowledge Resource Centre, GITAM University, Visakhapatnam
19th July, 2018
- 9. Studying and Researching in Chemistry**
M. Sai Baba

Talk delivered at PG Centre of BVK College, Visakhapatnam
19th July, 2018

10. Atomic Energy and Energy Security of India

M. Sai Baba

Invited talk delivered at JNCAR, Bengaluru, organised by DHWANI
7th June, 2018

11. Science Communication Skills

M. Sai Baba

Invited Talk delivered at Dr. Baldev Raj Memorial Bridge Course on Non-destructive Evaluation and Quality Assurance (BRM-BCNQ 2018)

24th May, IGCAR, Kalpakkam

Organised by Indian Society for Non-destructive Testing (ISNT) Kalpakkam Chapter, Society for Failure Analysis (SFA) Chennai Chapter and Indira Gandhi Centre for Atomic Research (IGCAR)

12. Atomic Energy and Energy Security of India

M. Sai Baba

Talk delivered at JNCAR, Bengaluru, organised by DHWANI

7th June, 2018

organised by DHWANI

13. Atomic Energy: Kangri for energy security?

M. Sai Baba

Wednesday Talk at NIAS, Bengaluru

23rd May, 2018

14. Nuclear Education and R&D in India

M. Sai Baba

Invited Talk delivered at “4th India Nuclear Industry Congress 2018”,

Nuclear Power Augmentation through Domestic and International Endeavors

26th April, Mumbai

Served as Chairman of the panel discussion on “LWRs in India-Challenges and Solutions for Moving Forward.

Chaired the Session “Nuclear Liability and Insurance in India.

15. Characterization of Scientific Inquiry: Axioms, Hypotheses, Theory, Predictions, Repeatability, Observability and Verifiability

M. Sai Baba

Lead Talk, in the Technical Session: Exploring Consciousness: Methodological Framework”,

National Workshop on “Mind, Consciousness and Beyond: Building on Vedantic Metaphysics”

6th March 2018, NISTADS, New Delhi

16. Team Building for Innovation with implication for Science, Policy and General Management

M. Sai Baba

NIAS-DST Training Programme on “Science Policy and General Management”

26 February 2018

17. Towards a Comprehensive Indian STI Ecosystem

M. Sai Baba

Delivered the talk and Chaired the session.

CSIR-NISCAIR-DST National Workshop on “Science, Technology and Innovation Policy: Optimising Communication & Information Research”
NASC Complex, Pusa, New Delhi, 23-25 January 2018

18. Emerging Worldview on India’s Scientific Wisdom

M. Sai Baba

talk delivered as part of the Panel Discussion

17th Indian Science Communication Congress (ISCC 2017)

“Communicating India’s Scientific Wisdom: Changing Paradigms”

Organised by NISCAIR, IIMC, ISWA, VIBHA, SIS and ISCOS

at Indian Institute of Mass Communication Society, New Delhi, 21-22 December 2017

19. Science Administration and Management

M. Sai Baba

NIAS-DST Training Programme on “Policy for Science and Science for Policies

3rd January, 2018

20. Art of Science Communication

M. Sai Baba

NIAS-DST Training Programme on Multi-Disciplinary Perspective on Science, Technology and Society

18th December, 2017

21. Science Writing Workshop for Ph.D. scholars

M. Sai Baba

Chairman of the Session

Round Table Meet on Mass Communication

3rd India International Science Festival 2017

13-14 October 2017, NIOT, Chennai

22. Academic and Research Libraries-Indian Vision 2022

M. Sai Baba

Member of the Panel Discussion

International Conference on Knowledge Organisation, Library and Information Management

October 23-25, 2017, Indian Institute of Technology Madras, Chennai.

23. Emerging Worldview on India's Scientific Wisdom

M. Sai Baba

Member of the Panel Discussion organised as part of "17th Indian Science Communication Congress (ISCC 2017) held at Indian Institute of Mass Communication, New Delhi, 21-22 December.

24. Access to Information Resources: Change, Challenge and Opportunity

M. Sai Baba

Best Practices, Services and Challenges for Re-Envisioning

CALIBER 2017, International Conference held at Anna University, Chennai, 3-4 August, 2017

25. HRD Strategies for R&D Organisations

M. Sai Baba

26. Effective Science Communication
M. Sai Baba
Bridge Course on NDE for M.Tech Students
IGCAR, Kalpakkam, 19 May, 2017
27. Human Resource Development for Enhanced Growth of Nuclear Industry
M. Sai Baba
3rd India Nuclear Industry Congress 2017
Mumbai, 11-12 April 2017
28. In pursuit of excellence
M. Sai Baba
BVK College, Visakhapatnam
4th March 2017
29. Atomic Energy: Challenge and Opportunities
M. Sai Baba
Annual Technology and Management Festival 'Wissenaire'17'
IIT Bhubaneswar , 4th February 2017
30. Atomic Energy: Challenge and Opportunities
M. Sai Baba
College of Defence Management, Secunderabad
12th December 2016
31. In pursuit of excellence
M. Sai Baba
Technovit, VIT Chennai
Chennai, 15 September, 2016
32. Nuclear Energy and Energy Security
M. Sai Baba
NEEDS 2106, Nuclear Energy-Environment Demand and Support
Department of Chemistry, Satyabama University, Chennai
7 September 2016
33. Perspective on Scientific Writing
M. Sai Baba
Bridge Course for M.Tech students
IGCAR, Kalpakkam, 2 June, 2016
34. Perspective on Scientific Writing
M. Sai Baba
Workshop on Art of Technical Writing
DAE-ATI Workshop, IGCAR, Kalpakkam, 22 February, 2016
35. Atomic Energy: Challenge and Opportunities
M. Sai Baba
Institute Lecture at NIT Warangal

Undergraduate, Post graduate, Research Scholars and Faculty
2nd November 2015

36. Changing Phase in Access to Resources: Challenge and Opportunities

M. Sai Baba

(Keynote address)

“Accessing Resource: New Avenues in Explorative Methodologies”

UGC Sponsored State Level Seminar, Loyola College, Chennai, 9 January, 2015

37. Digital Library and Enabling Technologies

M. Sai Baba

at SIRD, BARC, October 14, 2015

38. Perspective on Scientific Writing

M. Sai Baba

Workshop on Art of Technical Writing

DAE-ATI Workshop, ATI Mumbai, 7 August 2015

39. Perspective on Scientific Writing

M. Sai Baba

Workshop on Art of Technical Writing

DAE-ATI Workshop, IGCAR, 26 March, 2015

40. Information Resources at SIRD

M. Sai Baba

International Seminar on Application of Communication and Information Technology in Libraries (SACTiL), 28-30 January 2014, VECC, Kolkatta

(Invited Presentation)

41. Information Resources: Challenges and Opportunities

M. Sai Baba

International Seminar on Application of Communication and Information Technology in Libraries (SACTiL) 2014.

42. Transforming Libraries: Be the Change

M. Sai Baba

“From Building Collections to Making Connections: Transforming Libraries in the Knowledge Era” NAACLIN 2014, DELNET & French Institute of Pondicherry

December 9-11, 2014

43. Access to e-Resources: Challenges and Opportunities

M. Sai Baba

“Best Practices for Effective Usage of Online E-Resources for promoting Research and development”

Two Days TEQIP-II Workshop, NIT Trichy, 26 & 27 September, 2014

44. In pursuit of excellence: Being an Engineer

M. Sai Baba

Orientation Program for the First Year Students of NIT Trichy

20 August, 2014

45. Atomic Energy: for Energy Security of the Country
M. Sai Baba
ENERGEIA14, NIT Trichy, 25 March, 2014
46. Atomic Energy: Challenge and Opportunities
M. Sai Baba
WORKSHOP on “Role of Nuclear Energy for Sustainable Future Development”
NEFD’14”(Organized by Jeppiar Institute of Technology 25-26 March 2014
47. Atomic Energy for Enhancing the Quality of Life
M. Sai Baba
Workshop on “NuGen-Nuclear Power Generation”
Kurukhetra 2014, College of Engineering, Guindy 30 January, 2014
48. Digital Resources and Enabling Technologies
M. Sai Baba
9th Biennial National Conference on Recent Advances in Information Technology (READIT), 18-19
December, 2013, IGCAR, Kalpakkam
49. Nuclear Energy- Green Technology
M. Sai Baba
‘Green Technologies’ UGC National Conference
St. Joseph’s college for women, Visakhapatnam, 8 November, 2013
50. Scientific Information Resources Division at Indira Gandhi Centre for Atomic Research
M. Sai Baba
Faculty from Great Lakes Institute of Management
23 April, 2013
51. Information Technology for Information Science
M. Sai Baba
“SANGOSHTHI 2012”, 22 December, 2012
52. High Temperature Mass Spectrometry
M. Sai Baba
Seminar on Recent Advances of Spectroscopy in Chemistry,
Department of Organic Chemistry, BVK College, Visakhapatnam, 27 February, 2012
53. Semantic Digital Library
M. Sai Baba
DRDO Libraries for the Future: Emerging Trends and Technologies in Collection, Competencies
and Cooperation,
DESIDOC and INMAS, CEPTAM, Bangalore, 3-7 December, 2012
54. Building Semantic Digital Library Infrastructure
M. Sai Baba
8th READIT, 28 December, 2011
55. Identifying Research Problems, Planning the Experiments & Representing the Results
M. Sai Baba
Workshop on Scientific Writing and Presentation, Women's Christian College, Chennai, 18,

February, 2010

56. Scientific Information Resources Division at Indira Gandhi Centre for Atomic Research
M. Sai Baba
Students of Information and Library Science
Andhra University, 12 August, 2010
57. Knowledge Management Practices in Higher Education
M. Sai Baba
Students of Library and Information Science
Department of Library and Information Science, Andhra University, 12 July, 2009
58. Knowledge Management Practices in Higher Education
M. Sai Baba
Sangoshti 2008, IGCAR, Kalpakkam 24-26 July, 2008
59. Strategies for Enhancing R&D & Academic Institutes linkage
M. Sai Baba
Funding Opportunities for Sponsored Research
organised by "Board of IT Education Standards (BITES) "
JSS Academy for Technical Education, Bangalore, 5 May, 2007
60. How to be Effective
M. Sai Baba
Residential Training Program on
"Management Development for Group 'A' Officers of DAE"
IGCAR, Kalpakkam, 19th February to 3rd March, 2007
61. Human Resource Development
M. Sai Baba
Residential Training Program on
"Management Development for Group 'A' Officers of DAE"
IGCAR, Kalpakkam, 19th February to 3rd March, 2007
62. How to be Effective
M. Sai Baba
Residential Training Program on
"Management Development for Scientific Officers of DAE",
IGCAR, Kalpakkam, 22nd January to 3rd February, 2007
63. Human Resource Development Strategies for R&D Organisation
M. Sai Baba
Residential Training Program on "MANAGEMENT DEVELOPMENT"
IGCAR, Kalpakkam, 22 February, 2007
64. Human Resource Development Strategies for R&D organisation
M. Sai Baba
ANS-INS Joint Workshop on "Preparing for the Nuclear Renaissance: Strategies for Human
Resources Development and Nuclear Knowledge Management"
IGCAR, Kalpakkam, 20 January 2007

65. Human Resource Development
M. Sai Baba
Residential Training Program on
“Management Development for Scientific Officers of DAE”
IGCAR, Kalpakkam, 22nd January to 3rd February, 2007
66. Determination of Vapour Pressures: a Survey of Available Methods
M. Sai Baba
Theme meeting “CHEMTHERM-07”, IGCAR, Kalpakkam, 2007
67. How to be Effective
M. Sai Baba
Residential Training Program on “Management Development for Officers in the grades of APO, AAO, Security officers and Asst. Purchase Officers of DAE”,
IGCAR, Kalpakkam, 11 to 23 December, 2006
68. High Temperature Mass Spectrometry
M. Sai Baba
IIT Madras , 16 October 2006
69. Methods of Measurement of Vapour pressures
M. Sai Baba
Theme meeting “CHEMTHERM-06”, IGCAR, Kalpakkam, 2006
70. Isotope Dilution Mass Spectrometry (IDMS) for Measurement of Elemental Concentration
M. Sai Baba
Theme meeting on “Isotope Ratio and Concentration Measurements by
TIMS & ICP-MS”, IGCAR, Kalpakkam, 2-4 August, 2006
71. Research Activities using TIMS at IGCAR
M. Sai Baba
Theme meeting on “Isotope Ratio and Concentration Measurements by
TIMS & ICP-MS”, IGCAR, Kalpakkam, 2-4August, 2006
72. Mass Spectrometric Studies on Irradiated Fuels
Theme meeting on “Mass Spectrometry in Nuclear Fuel Cycle”
IGCAR, Kalpakkam, 21-23 December, 2005
73. Measurement of Thermo-chemical Properties of Nuclear Materials
M. Sai Baba
Theme Meeting on “Mass Spectrometry in Nuclear Fuel Cycle”
IGCAR, Kalpakkam, 21-23 December, 2005
74. Mass spectroscopy
M. Sai Baba
“50 years of the Department of Physics”, Women’s Christian College, Chennai, 2005
75. Application of Mass spectrometry for Nuclear Technology
M. Sai Baba
NGRI, Hyderabad, 2004

76. High Temperature Mass Spectrometry
M. Sai Baba
School of Chemistry, Andhra University, August 25, 2004
77. Method of Age Determination by Carbon dating
M. Sai Baba
SBOA School, Chennai, 2003
78. Radio Carbon Dating
M. Sai Baba
KV-II, Kalpakkam, August, 2003
79. Thermodynamics of Fullerenes
M. Sai Baba
Endowment Lecture: 2000-2001, Department of Chemistry, Madras Christian College, Chennai, 20 February, 2001
80. Application of Mass Spectrometry in the High Temperature Chemistry Research
M. Sai Baba
"ISMAS Workshop on Mass Spectrometry", National Institute of Oceanography, Dona Paula, Goa, India, December 12-16, 2000
81. Thermodynamic and Phase Diagram Studies on Fullerenes
M. Sai Baba
Institute of Inorganic Chemistry, University of Wroslaw, Poland, 1998
82. Mass Spectrometry of Fullerenes
M. Sai Baba
Graduate Students of Texas A&M University, College Station, USA, 1997
83. High Temperature Mass Spectrometry
M. Sai Baba
"7th Workshop on Mass Spectrometry", Trivandrum, India, August 1995
84. Mass Spectrometry of Fullerenes,
M. Sai Baba
"7th Workshop on Mass Spectrometry", Trivandrum, India, August 1995
85. Thermodynamic Studies on Fullerenes
M. Sai Baba
Discussion meeting on Fullerenes, at Kalpakkam, India, March 1993

In addition:

- I. Given several talks (exceeding 100) to Students (undergraduate and post graduate) of several academic institutes and Visiting delegations, on:
 - (i) IGCAR and its mission"
 - (ii) Atomic Energy for energy security and enhancement of quality of life"
 - (iii) Atomic Energy: Challenges and Opportunities".
- II. Delivered talks on:
Self-motivation for enhanced performance

to students and young research scholars, and participants of management training programmes. More than 100 talks have been given to various students and young officers.

Best Paper Awards (20)

Many of the research papers co-authored have won **Best Paper/Presentation/Poster Awards**. List of the same are given below.

1. Causal Factor Mining of Publication Data: A Case Study
K. Bharathi Manjula, N. Madurai Meenachi, G. Sivakumar, B. Venkatraman and M. Sai Baba
Proceedings of 11th National Conference on Advances in Information Technology (READIT-2018)
IGCAR, Kalpakkam, August 8-9, 2018, pages 183-188
(Best Paper-Oral Presentation)
2. Exploring the Font Attributes of Microsoft Word: A Steganographic Perspective
R. Bala Krishnan, Prasanth Kumar Thandra and **M. Sai Baba**
International Conference on Frontiers in Engineering, Applied Sciences and Technology (FEAST' 17), National Institute of Technology, Tiruchirappalli, March 31 - April 1, 2017 (Best Paper Award)
3. Oxygen Potential Analysis of Molybdenum in MOX Fuel
Ronit Kumar Panda, S. Clement Ravichandar and **M. Sai Baba**
13thDAE-BRNS Nuclear and Radiochemistry Symposium (NUCAR-2017) at KIIT University, Bhubaneswar, February 6-10, 2017 (Best Poster Award)
4. Automated Web Based System for Task Force/High Level Committees at IGCAR
M. Kanaga, J. Jasmine Smila, S. Sujatha, K. Sai Priya, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (Best Poster Award)
5. Information Management at MRPU: A Case Study
P. Janupriya, P. P. Muralikannan, Narendra Kumar Kushwaha, Vidya Sundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (Best Paper Award)
6. Single Window Logon and Federated Gateway for Information Retrieval
Renigunta Vinay Datta, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (Best Paper Award)
7. Server Consolidation Algorithms using Live Migration of Virtual Machines
Pathikrit Ghosh, E. Soundararajan and **M. Sai Baba**
Recent Advances in Information Technology (READIT-2016)
IGCAR, Kalpakkam, July 13-16, 2016 (Best Paper Award)
8. A Novel Conductometric Titration Technique for Determination of Rate Constant Using Pulsating Sensor
K. Das, P. Sahoo, **M. Sai Baba**, N. Murali and P. Swaminathan
ELAC 2010, page 128-131
Fourth ISEAC Triennial International Conference on Electroanalytical Chemistry and Allied Topics, March 16 – 18, 2010 Toshali Sands, Puri, Orissa
Editors: Suresh K. Aggarwa, Saurav K. Guin

The paper was adjudged as the **best poster (2nd position)**

9. Thermodynamic Stability of $Mn_6Te_5O_{16}(s)$ from High Temperature Mass Spectrometric Studies over the Phase Field $MnO(s) + Mn_3O_4(s) + Mn_6Te_5O_{16}(s)$
T.S. Lakshmi Narasimhan, **M. Sai Baba**, R. Viswanathan
10th ISMAS Triennial International Symposium on Mass Spectrometry,
January 28- February 1, 2006, Munnar, India
The paper was adjudged as the **best paper** in the "Inorganic Chemistry Section"
10. Measurement of Vapour Pressures by TG-based Transpiration Method
M. Sai Baba and S. Nalini
Proceedings on the "Thirteenth National Symposium on Thermal Analysis" (THERMANS 2002)
Eds. C.G.S. Pillai, K.L. Ramkumar, P.V. Ravindran and V. Venugopal
p. 210-212.
Adjudged Best Paper Poster presentation (second place)
11. Phase Diagram Studies on Mn-Te-O System
T.S. Lakshmi Narasimhan, **M. Sai Baba**, Nalini S and R. Viswanathan
Proceedings on the "Thirteenth National Symposium on Thermal Analysis" (THERMANS 2002)
Editors: C.G.S. Pillai, K.L. Ramkumar, P.V. Ravindran and V. Venugopal
Page 221-222,
Adjudged Best Paper Oral presentation (Third place)
12. Vaporisation Studies on $TeO_2 (s)$
T.S. Lakshmi Narasimhan, **M. Sai Baba** and R. Viswanathan
p 712-715.
Presented at "8th ISMAS Symposium on Mass Spectrometry", held at IICT, Hyderabad,
December 7-9, 1999
Adjudged First place in the Inorganic Chemistry and Thermodynamics Session
13. Mass Spectrometric Study of Uranium-Plutonium Mixed Carbide Spent Fuel Solution
S. Nalini, R. Balasubramanian, **M. Sai Baba**, D. Darwin Albert Raj, R. Viswanathan,
p. 851-853.
Presented at "8th ISMAS Symposium on Mass Spectrometry", held at IICT, Hyderabad,
December 7-9, 1999
Adjudged First place in the Nuclear Technology Session.
14. Applications of Mass Spectrometry in Physical and Analytical Chemistry
Sai Baba, M., Lakshmi Narasimhan, T.S., Balasubramanian, R., and Nalini, S.
National Seminar on Chemical Education and Research, at Madras, India, November 1995, I&A
5.
Adjudged as Best paper (First place) in the "Inorganic, Analytical and General Chemistry" section
15. Determination of C_{60} - C_{70} Phase Diagram
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and C.K. Mathews
Adjudged **best paper (first place)** in the Inorganic and Chemical Thermodynamics section, at "VI National Symposium on Mass Spectrometry" held at Indian Institute of Petroleum, Dehradun, India, from October 11-13, 1993.

16. High Temperature Mass Spectrometric Studies of Manganese Telluride
M. Sai Baba, R. Viswanathan, T.S. Lakshmi Narasimhan, R. Balasubramanian, D. Darwin Albert Raj and C.K. Mathews
Adjudged **best paper (first place)** in the Inorganic and Chemical Thermodynamics section, at "V National Symposium on Mass Spectrometry" held at Physical Research Laboratory, Ahmedabad, India, from January 7-9, 1991.
17. **Gibbs Energy of Formation of NaCrO₂ by High Temperature Mass Spectrometry**
T. Gnanasekharan, R. Viswanathan, **M. Sai Baba**, D. Darwin Albert Raj, R. Balasubramanian and C.K. Mathews
Adjudged **best paper (second place)** in the Atomic and Molecular Physics, Inorganic Chemistry and Thermodynamics section, at "IV National Symposium on Mass Spectrometry" held at Indian Institute of Science, Bangalore, India from January 4-6, 1988.
18. Vaporisation Thermodynamics of Fe-Te system- A High Temperature Mass Spectrometric Study
M. Sai Baba, R. Viswanathan, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews,
Journal of Chemical Thermodynamics 20 (1988) 1157
Adjudged as the **best paper (first place)** in basic sciences amongst those published from Radio Chemistry Group, Indira Gandhi Centre for Atomic Research, Kalpakkam, India, between 1980-1990.
19. Electron Impact Ionisation of Fullerenes: Appearance Energies of C₆₀⁺, C₆₀²⁺ and C₆₀³⁺
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and C.K. Mathews
International Journal of Mass Spectrometry and Ion Processes, 125 (1993) R1
Adjudged as the **best paper (second place)** amongst those published from our laboratory (Chemical Group, Indira Gandhi Centre for Atomic Research, Kalpakkam, India) between 1992-1993.
20. Applications of Mass Spectrometry in Physical and Analytical Chemistry
M. Sai Baba, T.S. Lakshmi Narasimhan, R. Balasubramanian and S. Nalini
Adjudged as **best paper (first place)** in the "Inorganic, Analytical and General Chemistry" Section, at "National Seminar on Chemical Education and Research" held at Loyola College, Madras, India, 23-25 November 1995.

List of Students who have completed PhD (5)

Details of the students who did their Ph.D. with Homi Bhabha National Institute.

1. Ms. Subhra Rani Patra
Development of computation intelligence systems for parameter estimation and event identification in fast breeder reactors
Year of completion: 2014
2. Mr. S. Raju
A study on the role of thermometric measurement and modelling in materials design
Year of completion: 2015
3. Ms. N. Madurai Meenachi
Semantic web based knowledge representation for nuclear reactor domain
Year of completion: 2015
4. Mr. ML Jayalal
Application of genetic algorithm based optimization methodologies to some of the sub-systems of Indian nuclear reactors
Year of completion: 2016
5. Mr. R. Balakrishnan
Information assurance through better network security methodologies in a sensitive
Year of completion: 2017