

**2017**

**Curriculum vitae**

**Prof. R. G. Sonkawade**

**Dept., of Physics**

**Shivaji University,**

**Kolhapur-416 004**

**Former Dean, School for**

**Physical Sciences,**

**Babasaheb Bhimrao**

**Ambedker University**

**(Central University)**

**Lucknow-25**

## CURRICULUM VITAE

**Name:** Dr. R. G. Sonkawade

**Current Position:** Professor

**Present Address:** Department of Physics,  
Shivaji University, Kolhapur-416 004 (M.S.).



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**Last Profession:** Former Dean  
School for Physical Sciences & Professor,  
Former Head, Dept., Of Applied Physics  
Former Director (i/c), Residential Coaching Academy  
**Babasaheb Bhimrao Ambedkar University  
(Central University)**, Vidya Vihar, Rae Bareli Road,  
Lucknow-226025, Uttar Pradesh.

Senior Scientist  
Inter University Accelerator Centre (Formerly Nuclear Science  
Centre) [Reserach institute of University Grants Commission]  
**New Delhi-110 067**

### **Academics:**

<b>Degree</b>	<b>University</b>
B. Sc	Dr. Babasaheb Ambedkar Marthwada University, Aurangabad, Maharashtra, India
M. Sc	Dr. Babasaheb Ambedkar Marthwada University, Aurangabad, Maharashtra, India
Dip. R. P*	Bombay University, Mumbai, Maharashtra, India
Ph. D**	Hemwati Nandan Bahuguna University, (Central University) Tehri Grahwal, Srinagar, Uttarakhand, India

**\*Dip. R.P: Post Diploma in Radiological Sciences, conducted by Bhabha Atomic Research Centre (BARC), Mumbai and the degree awarded by Bombay University, Mumbai.**

**\*\*Radon, thoron and helium studies in air, soil and ground water: Application to Geothermal Resources and Radiation Protection**

**Education:**

I was awarded the Degree of Doctor of Philosophy from Hemwati Nandan Bahuguna University, Srinagar (Garhwal), Uttarakhand. I completed my M.Sc. in Physics with specialization in Electronics in the year 1995 from Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra State and also acquired my post M. Sc. Diploma in Radiological Physics (DRP) from Bhabha Atomic Research Centre (BARC), Mumbai.

**Work Experience:**

Position	Institution	Tenure
Professor	Department of Physics, Shivaji University, Kolhapur-416 004, Maharashtra	September 2014 to till date
Scientist	Inter University Accelerator Centre (Formerly Nuclear Science Centre), New Delhi-110 067	June 2013 to September 2014
Professor ( Dean & Head)	Babasaheb Bhimrao Ambedkar University (A Central University), VidyaVihar, Rae Bareli Road, Lucknow-226025, UP	June 2011 to June 2013
Scientist	Inter University Accelerator Centre (Formerly Nuclear Science Centre), New Delhi-110 067	September 1997 to June 2011
Medical Physicist	Shri Siddhivinayak Cancer Hospital, Miraj.	February 1997 to September 1997
Medical Physicist	Uddhav Memorial Cancer Hospital, Mumbai-Agra Road, Adgoan, Nasik.	October 1996 to January 1997

**Total experience at National Research Institute & University:** ~20 Years

**Expertise/Areas of Specialization:**

- Material Sciences (Polymers and TLD).
- Radiation Protection in the Accelerator/Environment.
- Radiation Dosimetry (Neutron and Gamma).
- Radiation Physics/Nuclear Geophysics.
- Medical Physics.

**Patents: 01** (3138/DEL/2010)

**Publications:**

98-publications have appeared in many reputed referred journals in the field of material sciences/radiation protection/radiation in environment. Published around 75 research papers in the refereed journals, 23 in the conference proceedings and 57 in the book of abstracts and 15 technical reports, and actively delivering invited talks in various academic conference at National and International levels (Please see **Annexure-1**).

**Participation:**

Participated in the international and national conferences and delivered various Invited talks related to Material Sciences, radiation physics and environment. Apart from that various popular talks were delivered at Central University and Colleges. Being member on various statutory bodies of Institutes of National Importance, Central Universities, State Universities, Deemed Universities and autonomous colleges contributed a lot for higher education through such bodies. Member, National Consultation Meet on "Improving State Public Universities" organized by Central University of Gujarat, to enable the Ministry of **Human Resource Development** to compile a comprehensive Consultation Document comprising inputs from all such consultations to be placed before **National Education Policy (NEP)** Task Force.

**Recognition and Awards:**

- **International Atomic Energy Agency (IAEA), Vienna, Austria** has awarded me a grant of US \$3600 to facilitate the participation at the 10<sup>th</sup> International Conference on Environmental Remediation and Radioactive Waste Management, which was held at **Glasgow, Scotland, UK**.
- Visiting Scientist Fellowship from **Japan Society for Promotion of Sciences (JSPS), Japan**. Worked at **High Energy Accelerator Research Organization (KEK)**, 1-1 oho, Tsukuba-Shi, Ibaraki-Ken, 305, **Japan** from June to September, 2006.

- Recognized guide at **JawaharlalNehru University (JNU)**, N. Delhi for guiding Ph.D. students.
- Recognized Co-guide at various Universities and NITs
- Ph.D., awarded 05
- Guiding 08-Ph.D. research scholars at present in the capacity of Guide.

### **Membership/Affiliation and Positions held:**

#### **Membership of Academic Societies**

- The International Nuclear Track Society (INTS)
- International Radiation Physics Society (IRPS)
- Indian Association of Radiation Protection (IARP)
- Nuclear Track Society of India (NTSI)

#### **Positions**

- Peer Team Member/Member Co-ordinator, **National Assessment and Accreditation Council (NAAC)**, Bangalore for Universities and colleges assessment. From 2009 **accredited many Universities, Colleges and Institutes**.
- Member, General Council, National Institute for Hearing Handicapped, Mumbai, Govt., of India nominee from **Ministry of Social Justice**, Delhi [2014-2016]
- Patron, Nuclear Track Society of India (NTSI) [2013-2015].
- President, Nuclear Track Society of India (NTSI) [two terms for 04 years 2009-2013].
- Have served as the Organizing Secretary, Convener as well as a member of the Organizing Committees of various International & National conferences and workshops.
- UGC nominated member on various committees of different Universities to review the promotion of readers to professors under the Career Advancement Scheme (CAS). Various Universities of the country visited as a UGC observer.

- UGC nominated member of the Governing Board of various autonomous colleges.

**Statutory Body Membership:**

- Member of Constitution of the Third Academic Council of Central University of Gujrat [2017].
- Member of Advisory Committee, Center for climate change at Central University of Gujrat [2016].
- Member, Research and Affiliation committee, Solapur University, Solapur [2015-2016]
- Member, Board of Management at Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for a period of 3-years from May 2012.
- Member, Finance Committee at Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for a period of 3-years from 10/07/2010.
- Member, Board of Studies, University School of Basic and Applied Sciences, Guru Gobind Singh Indraprashta University, New Delhi for a period of 2-years from 05/10/2010.
- Member, Planning board at Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for a period of 3-years from 01/05/2009.
- Member, Governing Council, Inter University Accelerator Centre (formerly Nuclear Science Centre), N. Delhi for a period of 3-years from November 2010.
- Member, Governing Board, Inter University Accelerator Centre (formerly Nuclear Science Centre), N. Delhi for a period of 3-years from November 2010.
- Member, Finance Committee, Inter University Accelerator Centre (formerly Nuclear Science Centre), N. Delhi for a period of 3-years from November 2010.
- Member, Scientific Advisory Committee, Inter University Accelerator Centre (formerly Nuclear Science Centre), N. Delhi for a period of 3-years from November 2010.
- Member, Accelerator Users Committee, Inter University Accelerator Centre (formerly Nuclear Science Centre), N. Delhi for a period of 3-years from

November 2010.

- Member, General council, Netaji Subhas Institute of Technology, N.Delhi-110 078 for a period of 3-years from May 2010.
- Member, Board of Management, Jain Vishva Bharti University (Deemed University), Ladnun, Rajashtan, (UGC nominee) for a period of 3-years from January 2009
- Member, Board of Management of the IIS University (Deemed University), Jaipur, Rajashtan, (UGC nominee) for a period of 3-years.
- Member, Planning & Monitoring Board of Vignan's Foundation for Science, Technology & Research, (Deemed University), Vadlamudi-522 213, Guntur (A.P.) (UGC nominee) for a period of 3-years.
- Member, Governing Council of High Altitude Plant Physiology Research Centre of Hemwati Nandan Bahuguna Garhwal University, Uttaranchal, (UGC nominee) for a period of 3-years.
- Member, Advisory Committee of Karpagam University, Karpagam Academy of Higher Education, Coimbatore (Tamilnadu) for a period of 3-years.
- Member, Governing Board, Sadakatappa College (Autonomous College) Tirunelveli, Tamilnadu, for a period of 6-years from 2006-07.
- Member, Governing Board, Ambah College (Autonomous College) Ambah, Madhya Pradesh for a period of 6-years from 2006-07.
- Member, Academic Council, Prince Institute of Innovative Technologies, Gaziabad.

#### **Chairman of Statutory Bodies:**

- **Chairman, Board for Post Graduate Studies (BPGS)**, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for a period of 3-years from August 2011.
- **Chairman, School Board**, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for a period of 3-years from August 2011.
- **Chairman, Research Development Committee**, Babasaheb Bhimrao

Ambedkar University (A Central University), Lucknow for a period of 3-years from August 2011.

**Other Assignments:**

- Subject expert/nominee in different selection Committees on various academic and administrative posts in various research institutes/State Universities and Central Universities.
- Nominated member of selection committees in various offices of Maharashtra State Government
- Chairman, University Level Purchase Committee, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow
- Chairman, Sports Advisory Committee, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow
- Member of SC/ST-roster preparation committees at different institutes.
- Approved member on various Institutes/Universities as Research Guide.
- Member, Standing Committee on Administration and other committees of Inter University Accelerator Centre, N. Delhi.

**Overseas assignments:**

Have visited many countries to present/participate papers and deliver/contribute Lectures on various occasions, like:

- **Barcelona, Spain (Europe, 2004)** (to attend the 22<sup>nd</sup> International Conference on Solid State Nuclear Track Detectors).
- **Glasgow, Scotland (UK, 2005)** (to attend the 10<sup>th</sup> International Conference on Environmental Remediation and Radioactive Waste Management).
- **Japan (Asia, 2006)** (visiting Scientist at High Energy Accelerator Research Organization).
- **Belgium (Europe, 2007)** (to attend the 11<sup>th</sup> International Conference on Environmental Remediation and Radioactive Waste Management).



### **Research Projects:**

1. Principal investigator of Research Project entitled "Effect of Swift Heavy Ion irradiation on Supercapacitor properties of Manganese Oxide/Conducting polymer thin film" Inter University Accelerator Center, Delhi, Rs.5,79,000 /-F. No. IUAC/XIII.7/UFR-60326 2<sup>nd</sup> August, 2016.
2. Principal Investigator of Research Project entitled "Effect of low and high energy Irradiation on metal conducting polymer composite films synthesized by electrochemical route" Inter University Accelerator Center, Delhi- University Grants Commission, N. Delhi-02 Rs.5,79,000/-F. No. IUAC/XIII.7/UFR-57320 February 23<sup>rd</sup>, 2015.
3. Principal Investigator of Research Project entitled "Estimation & Evaluation of Radon, Thoron in the Soil, Fly Ash and Radiation shielding materials and its systematic analysis with Gamma Spectrometry", (University Grants Commission, N. Delhi-02 RS. 11,98,800, F.No.42-813/2013(SR) 21<sup>st</sup> March 2013).
4. Principal Co-Investigator of Research Project entitled "Characterization of Conducting Polymers and their Structural, Electrical, Optical Properties by using swift heavy ions", Nuclear Science Centre, New Delhi, 2004 to date (UGC Funded University Projects).
5. Principal Co-Investigator of Research Project entitled "Development and Applications of Nuclear Track Filters using swift heavy ions" Inter University Accelerator Centre (UGC Funded University Projects)
6. Principal Co-Investigator of Research Project entitled "The study of Electrical, Optical and Structural properties of Irradiated Conducting Polymers" Inter University Accelerator Centre (UGC Funded University Projects)

7. Principal Co-Investigator of Research Project entitled "Study of Nano Scale Voids and free volume in heavy ion induced in conducting Polymers By-positron Annihilation Spectroscopy" Inter University Accelerator Centre (UGC Funded University Projects).
  
8. Principle Co-Investigator of Research Project entitled "Seismo-Tectonic Studies and Health Risk Assessments in the Himalayas with special emphasis on Radon and Helium Emission". Department of Science and Technology, New Delhi, 2005. (DST/23(476)/SU/2004)

## (Annexure-1)

### LIST OF PUBLICATIONS

#### Papers in Refereed Journals:

1. Rajeev Kumar, **R. G. Sonkawade**, Anil K Pandey, Madhavi Tripathi, Nishikant A Damle, Praveen Kumar, Chandra S Bal (2017): Practical experience and challenges in the operation of medical cyclotron, Nuclear Medicine Communications, 38, 10–14. [ISSN: 1473-5628, Impact Factor =1.453 ] Publisher: NMC.
2. Komal Badhan, Rohit Mehra, **R. G. Sonkawade** (2017): Natural Radioactivity Measurements in Soils of Jalandhar and Hoshiarpur Districts of Punjab, India, International Journal of Pure and Applied Physics,13, 232-237. [ISSN: 0973-1776, Impact Factor = ] Publisher: RIP.
3. Khalid Gul, A. K. Singh, **R. G. Sonkawade** (2016): Physicochemical, thermal and pasting characteristics of gamma irradiated rice starches International Journal of Biological Macromolecules, 85, 460–466. [ISSN: 0141-8130, Impact Factor =3.138 ] Publisher: Elsevier
4. Satyendra Kumar , Paramjit Singh , **R.G. Sonkawade**, Kamalendra Awasthi, Rajesh Kumar (2015): SHI irradiation of metal doped zinc sulfide polymer nanocomposites synthesized using micro emulsion method: Nuclear Instruments and Methods in Physics Research B, 358, 258–262. [ISSN: 0168-9002, Impact Factor: 1.216] Publisher: Elsevier.
5. Anil Sharma, **R. G. Sonkawade**, Avinash C. Sharma (2015) : Natural radioactivity and radiological hazard assessment of coal samples collected from Kasimpur thermal power plant, Kasimpur (U.P.), India :Int. J. Low Radiation, Vol. 10(2),[ISSN: 1477-6545] Publisher: Inderscience.
6. Anil Sharma, Ajay Kumar Mahur, **R. G. Sonkawade**, D. Sengupta., A.C. Sharma and Rajendra Prasad (2015): Measurement of radon exhalation rate from fly ash samples collected from Kolghat thermal power plant west Bengal, India; Int. J. Curr. Res. Vol. 07(01); 11430-11433. [ISSN: 0975-833X, Impact Factor = 6.226] Publisher:

7. Anil Sharma, Ajay Kumar Mahur, Asad Ali, **R. G. Sonkawade**, A. C. Sharma (2015): Monitoring of Indoor radon thoron levels and annual effective dose in some dwellings of Jaipur, Rajasthan, India using double dosimeter cups; Archives of Applied Science Research Vol. 07(02); 01-04 [ISSN: 0975-833X] Publisher:
8. Anil Sharma, Ajay Kumar Mahur, **R. G. Sonkawade**, A. C. Sharma and Rajendra Prasad (2014): Study of radon, thoron concentration and annual effective dose in some dwellings of Aligarh city Uttar Pradesh and Dwarka Delhi, India; Int. J. Curr. Res. Aca. Rev., 2(9). [ISSN: 2347-3215] Publisher:
9. Rajeev Kumar, **R. G. Sonkawade**, M. Tripathi, P. Sharma, P. Gupta, P. Kumar, A. K. Pandey, C. Bal, N. A. Damle, G. Bandopadhyaya (2014): Production of the PET bone agent  $^{18}\text{F}$ -fluoride ion, simultaneously with  $^{18}\text{F}$ -FDG by a single run of the medical cyclotron with minimal radiation exposure-A novel technique; Hellenic Journal of Nuclear Medicine, 106-110.
10. Satendra Kumar, Parmjeetsingh, **R. G. Sonkawade**, Kamledndra Awasthi, Rajesh Kumar (2014): 60MeV Ni ion induced modifications in nano-CdS/polystyrene composite films. Radiation Physics and Chemistry 94; 49-53.[ISSN: 0042-207X, Impact Factor = 1.317] Publisher: Elsevier
11. Yasir Ali, Vijay Kumar, **R. G. Sonkawade**, A S Dhaliwal (2014): Oxidative Polymerization of p-Toluenesulphonic Acid Doped Polypyrrole Spheroidal Using Galvanostatic Method; Energy and Environment Focus; Vol., 3, 1-6 [ISSN: 0969-806X] Publisher: Elsevier
12. Yasir Ali, Vijay Kumar, **R. G. Sonkawade**, A S Dhaliwal and H. C. Swart (2014): Gamma radiations induced modifications in Au- polypyrrole nanocomposites: Detailed Raman and X-ray studies: Vacuum 99, 265-271 [ISSN: 0042-207X, Impact Factor = 1.558 ] Publisher: Elsevier
13. Yasir Ali, Vijay Kumar, **R. G. Sonkawade**, A S Dhaliwal (2013): Swift heavy ion induced modifications in metal conducting polymer composite films, Nuclear Instruments and Methods in Physics Research (NIM B) 316, 42-47. [ISSN: 0168-583X, Impact Factor = 1.211] Publisher: Elsevier
14. P Ghosh, K Datta, A Mulchandani, **R. G. Sonkawade**, K Asokan and Mahendra D Shirsat (2013): A chemiresistive sensor based on conducting

polymer/SWNT composite nanofibrillar matrix effect of 100 MeV O<sup>16</sup> ion irradiation on gas sensing properties: Smart Materials and Structures 22, 035004 Publisher: IOP

15. Yasir Ali, Vijay Kumar, **R. G. Sonkawade**, M. D. Shirsat and A S Dhaliwal (2013): Two step electrochemical synthesis of Au nano particles decorated polyaniline nano fiber, Vacuum 93, 79-83 [ISSN: 0042-207X, Impact Factor = 1.317] Pub: Elsevier
16. Yasir Ali, Vijay Kumar, **R. G. Sonkawade** and A. S. Dhaliwal (2012): Effect of swift heavy ion beam irradiation on Au-Polyaniline composite films: Vacuum 90, 59-64 [ISSN: 0042-207X, Impact Factor = 1.317] Publisher: Elsevier.
17. Yasir Ali, Vijay Kumar, **R. G. Sonkawade** and A. S. Dhaliwal (2012): Fabrication of polyaniline nanofibres by chronopotentiometry: Advanced Materials Letters 3(5) 388-392. [ISSN: 0976-3961, Impact Factor = ] Publisher: VBRI press.
18. Vijay Kumar, **R. G. Sonkawade** and A S Dhaliwal (2012): Gamma irradiation induced chemical and structural modifications in PM-355 polymeric nuclear track detector film; Nuclear Instruments and Methods in Physics Research (NIM B) 290, 59-63. [ISSN: 0168-583X, Impact Factor = 1.211] Publisher: Elsevier.
19. Vijay Kumar, **R. G. Sonkawade** and A S Dhaliwal (2012): Effect of gamma irradiation on the properties of Plastic bottle sheet; Nuclear Instruments and Methods in Physics Research (NIM B) 287, 10–14. [ISSN: 0168-583X, Impact Factor = 1.211] Publisher: Elsevier.
20. Vijay Kumar, **R. G. Sonkawade** and A S Dhaliwal (2012): High electronic excitation induced modifications by 100 MeV O<sup>7+</sup> and 150 MeV Ni<sup>11+</sup> ions in Makrofol KG polycarbonate; Nuclear Instruments and Methods in Physics Research (NIM B) 287, 4–9. [ISSN: 0168-583X, Impact Factor = 1.211] Publisher: Elsevier.
21. Vijay Kumar, **R. G. Sonkawade**, S. K. Chakarvarti, and A. S. Dhaliwal (2012): Carbon ion beam induced modifications of optical, structural and chemical properties in PADC and PET polymers. Radiation Physics and Chemistry 81, 652-658. [ISSN: 0969-806X, Impact Factor = 1.277] Publisher: Elsevier.

22. Devender Gehlawat, R.P. Chauhan, **R. G. Sonkawade** and S.K.Chakarvarti (2012): "Effect of gamma irradiation on transport of charge carriers in Cu nanowires" *Applied Physics A*, 106(1) 157-164. [ISSN: 1432-0630, Impact Factor = 1.76] Publisher: Springer.
23. DevenderGehlawat, R.P. Chauhan and **R. G. Sonkawade**, (2012): "Effect of neutron exposure on transport of charge carriers in Poly-crystalline Cu nanowires" accepted in *Science of Advanced Materials*, 4(11) 1134-1141. [ISSN: 1947-2943, Impact Factor = 2.0] Publisher: *American Scientific Publishers*:
24. Vijay Kumar, **R. G. Sonkawade**, S. K. Chakarvarti, P. Kulriya, K. Kant, N.L. Singh and A. S. Dhaliwal (2011): Study of optical, structural and chemical properties of neutron irradiated PADC film., *Vacuum* 86(3), 275-279 [ISSN: 0042-207X, Impact Factor = 1.317] Publisher: Elsevier.
25. Rohit Mehra, Pankaj Bala, Komal Badhan, **R. G. Sonkawade**. (2011). *Assessment of Radiation dose due to natural radionuclides in various cement samples*, *International Journal of Low Radiations* Vol 8, No.2, 156-168. [ISSN: 1741-9190, Impact Factor = ] Publisher: Inderscience Publishers.
26. Rohit Mehra, Pankaj Bala, Komal Badhan, **R. G. Sonkawade**. (2011). *Assessment of seasonal indoor radon concentration in dwellings of Western Haryana*, *Radiation Measurements*, Vol., 46, 1803-1806. [ISSN:1350-4487, Impact Factor = 1.317] Publisher: Elsevier
27. Ramola, R. C., Ambika Negi, Anju Semwal, Subhash Chandra, Rana, J M S ., **R. G. Sonkawade**, Kanjilal D. (2011). *High Energy Heavy ion Irradiation Effects in Makrofol-KG Polycarbonate and PET*. *Journal of Applied polymer Science* Vol. 121, 3014-3019. [ISSN: 0021-8995, Impact Factor = 1.3] Publisher: Wiley Periodicals Inc.
28. Ambika Negi, R V Hariwal, Anju Semwal, **R. G. Sonkawade**, D Kanjilal, J M S Rana, R C Ramola (2011): Opto-chemical response of makrofol-KG to swift heavy ion irradiation. *Pramana*, 77(04) 707-714. [ISSN: 0304-4289, Impact Factor = .562] Publisher: Indian Academy of Science.
29. Komal Badhan, Rohit Mehra, **R. G. Sonkawade** (2011). Studying the variation of indoor radon levels in different dwellings in Hoshiarpur district of

Punjab, India Indoor and Built Environment, 1420-326X [ISSN: 1420-326X, Impact Factor = 0.634] Publisher: Sage Publications.

30. Rohit Mehra, Sandeep Kumar, **R. G. Sonkawade**, N.P. Singh, Komal Badhan (2009). *Analysis Of Terrestrial Naturally Occurring Radionuclides In Soil Samples From Some Areas Of Sirsa District Of Haryana, India Using Gamma Ray Spectrometry*, Environmental Earth Sciences Vol. 59, Issue-05 pp:1159-1164. [ISSN: 1866-6280, Impact Factor = 1.059] Publisher: Springer.
31. Devender Gehlawat, Shefali Jain, R. P. Chauhan and **R. G. Sonkawade**, "Synthesis and Characterization of ZnO nanoparticles" *ISST Journal of Applied Physics*, vol. 1(1) (2010) pp. 63. [ISSN: 0976-903X] Publisher:
32. Rati Varshney., **R. G. Sonkawade**., Monika Gupta., R. P. Chauhan., A. K. Mahur., K. Kant., A. parveen., S. K. Chakravarti. Bulk etch rate estimation of LR-115 SSNTDS using PHOENIX interface, *Radiation Measurement* 46(2011) 461-463. [ISSN: 1350-4487, Impact Factor = 1.317] Publisher: Elsevier.
33. **R. G. Sonkawade**, Vijay Kumar, Lalit Kumar, S Annapoorni, S. G. Vaijapurkar & A. S. Dhaliwal (2010): Effects of gamma ray and neutron radiation on polyaniline conducting polymer. *Indian Journal of Pure and Applied Physics* 48 453-456. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N. Delhi.
34. K. Kant, Rashmi, Sini Kuriakose, **R. G. Sonkawade**, R. P. Chauhan, S. K. Chakarvarti & G. S. Sharma (2010): Radon activity and exhalation rates in Indian fly ash samples. *Indian Journal of Pure and Applied Physics* 48 457-462. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
35. Vijay Kumar, **R. G. Sonkawade** & A. S. Dhaliwal (2010): Optimization of CR-39 as neutron dosimeter. *Indian Journal of Pure and Applied Physics* 48 466-469. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
36. Rati Varshney, A. K. Mahur, **R. G. Sonkawade**, M. A. Suhail, A. Azam & R. Prasad (2010): Evaluation and analysis of  $^{226}\text{Ra}$ ,  $^{232}\text{Th}$ ,  $^{40}\text{K}$  and radon exhalation rate in various grey cements. *Indian Journal of Pure and Applied Physics* 48 473-477. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N. Delhi.

37. Monika Gupta, R. P. Chauhan, Ajay Garg, Sushil Kumar & **R. G. Sonkawade** (2010): Estimation of radioactivity in some sand and soil samples. Indian Journal of Pure and Applied Physics 48 482-485. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
38. R. kumar, A. K. Mahur, H. Singh, **R. G. Sonkawade**, R. Swarup (2010): Radon levels in some dwellings around the international monument TajMahal, Agra using SSNTDs. Indian Journal of Pure and Applied Physics 48, 802-804. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
39. R. Mehra, K. Badhan, **R. G.S onkawade**, S. Kansal, S. Singh (2010): Analysis of Terrestrial natural radionuclides in soil samples and assessment of average effective dose. Indian Journal of Pure and Applied Physics 48, 805-808. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
40. Monika Gupta, R. P. Chauhan, Ajay Garg, Sushil Kumar, **R. G. Sonkawade** (2010): Estimation of radioactivity in some sand & soil samples. Indian Journal of Pure and Applied Physics 48, 482-485. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
41. A. K. Mahur, Rajesh Kumar, M. Mishra, S. A. Ali, **R. G. Sonkawade**, B. P. Singh, V. N. Bhardwaj & Rajendra Prasad (2010): Study of radon exhalation rate and natural radioactivity in soil samples collected from East Singhbhum Shear Zone in Jaduguda U-Mines Area, Jharkhand, India and its radiological implications. Indian Journal of Pure and Applied Physics 48 486-492. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
42. Ambika Negi, Anju Semwal, Subhash Chandra, R. V. Hariwal, **R. G. Sonkawade**, D. Kanjilal, Rana, J. M. S. ., R. C. Ramola, (2011). Modifications induced by  $\text{Li}^{+3}$ ,  $\text{Ni}^{+9}$  and  $\text{Au}^{+9}$  ion beams on CR-39 polymer track detector. Radiation Measurement 46, No.01, 127-132. [ISSN: 1350-4487, Impact Factor = 1.317] Publisher: Elsevier.
43. Anju Semwal, Ambika Negi, **R. G. Sonkawade**, J M S Rana & R C Ramola (2010): Effect of swift heavy ion irradiation on optical and structural properties of polysulphones polymer films. Indian Journal of Pure and Applied Physics 48 496-499. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.



44. Komal Badhan, Rohit Mehra & **R. G. Sonkawade** (2010): Measurement of radon concentration in ground water using RAD7 and assessment of average annual dose in the environs of NITJ, Punjab, India. *Indian Journal of Pure and Applied Physics* 48 508-511. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
45. Sandeep Kansal, Rohit Mehra, N. P. Singh, Komal Badhan & **R. G. Sonkawade** (2010): Analysis and assessment of radiological risk in soil samples of Hisar district of Haryana, India. *Indian Journal of Pure and Applied Physics* 48 512-515. [ISSN: 0975-1041, Impact Factor = 0.763] Publisher: CSIR, N.Delhi.
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#### **Published contributions in academic conferences**

1. **R.G. Sonkawade** (2015): *Electrochemical* fabrication of metal conducting polymer composites as radiation/Gas Sensors, International Conference on



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2. **R. G. Sonkawade** (2015): Synthesis and Characterization of metal conducting polymer composites as radiation and Gas Sensors, 19<sup>th</sup> National Conference on Solid State Nuclear Track Detectors and their Applications, organized by Department of Physics, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar-144 011 on November 19-21, 2015. Book of abstract, page no. **[Invited talk]**
  3. **R. G. Sonkawade** (2015): A new approach of Metal Deposited nanocomposites on conducting polymers and its response to ionizing radiation, National Conference on Environmental Radiation and Functional Materials organized by Department of Physics, Osmania University, Hyderabad. Feb., 28-March 01, 2015, Book of abstract, page no. **[Invited talk]**
  4. **R. G. Sonkawade** (2015): An overview of advances in nanotechnology and approach of environmental sensors using the techniques of Nanotechnology, National Symposium Advances in Environment Sciences on Feb., 27, 2015, School of Environment & Sustainable Development, Central University of Gujarat, Book of abstract, page no. **[Invited talk]**
  5. **R. G. Sonkawade** (2014): Modifications of conducting polymer matrix by metal nano particles and ion irradiation for gas sensing application. Centre of Excellence in Materials Science (Nanomaterials), Department of Applied Physics, Aligarh Muslim University, India, International Conference on Nanoscience and Nanotechnology "ALIGARH NANO-IV International 2014" during March 8-10, 2014 jointly with Ohio State University, USA and CEERI, Pilani, India. Book of abstract, page no. **[Invited talk]**
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