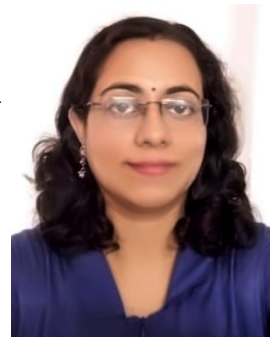


# Curriculum Vitae

**Name:** Dr. Debasmita Bondyopadhaya  
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## 1. Address:

- (a) *Residential Address* :P.O. Chotobazar, Nabapally , P.S. Barasat, Dist: North 24 Parganas, West Bengal, Pin - 700126,
- (b) *Office Address*: Department of Physics, Raiganj Surendranath Mahavidyalaya (College), Raiganj, North Dinajpur, West Bengal, Pin-733134 .
- (c) *Address for correspondence*: Same as Residential address.

## 2. Present Position:

Assistant Professor and Head of the Department of Physics, Raiganj Surendranath Mahavidyalaya (College), Raiganj, North Dinajpur.

## 3. Education:

- (a) B.Sc. from Jadavpur University, Kolkata, India in 2002.
- (b) M.Sc. from Jadavpur University, Kolkata, India in 2004.
- (c) Post M.Sc. scholar at Saha Institute of Nuclear Physics, Kolkata, India in 2004-2005.
- (d) **Ph.D.**(Science) from Saha Institute of Nuclear Physics -Jadavpur University, Kolkata, India on 2013. **Title of Thesis:** *Spectroscopy of Trans-Lead Nuclei*. **Name of the Supervisor:** Prof. Satyajit Saha.

#### 4. **Research experience with positions**

- (a) **Research Associate** at Saha Institute of Nuclear Physics, Kolkata, India from 2016 to 2017.
- (b) **Guest Researcher** at Bose Institute, Kolkata, India in 2016.
- (c) **Senior Scientific Researcher** in Flerov Laboratory of Nuclear Reaction, Joint Institute of Nuclear Research, Dubna, Moscow Region, Russia in 2015.
- (d) **Senior Research Fellow (extended)** at Saha Institute of Nuclear Physics, Kolkata, India from 2013 to 2014.
- (e) **Senior Research Fellow** at Saha Institute of Nuclear Physics, Kolkata, India from 2006 to 2013.
- (f) **Junior Research Fellow** at Saha Institute of Nuclear Physics, Kolkata, India from 2005 to 2006.

#### 5. **Short-term visits**

- (a) **Flerov Laboratory of Nuclear Reaction**, Joint Institute of Nuclear Research, Dubna, Moscow Region, **Russia** during 1st October - 13th October, 2017.
- (b) **Flerov Laboratory of Nuclear Reaction**, Joint Institute of Nuclear Research, Dubna, Moscow Region, **Russia** during 21st October - 6th November, 2016.

#### 6. **Employment:**

- (a) Assistant Professor in Physics at Raiganj Surendranath Mahavidyalaya (College), Raiganj, West Bengal, India since April, 2017 onwards.

#### 7. **Scholarships and Awards:**

- (a) National Scholarship awarded in 2002.
- (b) Qualified JEST in 2004.
- (c) Qualified GATE in 2004.
- (d) Qualified NET in 2005.

#### 8. **Present Research Interests:**

- (a) Spectroscopic study of heavy isotopes near doubly-magic Lead nuclei.
- (b) Spectroscopy to Study Nucleosynthesis. Low energy nuclear Astrophysics.
- (c) Nuclear Data Evaluation.
- (d) Detector Simulation using Monte Carlo technique.
- (e) High energy gamma rays from extra galactic sources.

#### 9. **Programming Skills:** C, Fortran, Python

## 10. Publications in International Journals:

- i) *"Search of effective interaction in dipole bands of an odd-odd trans-lead nucleus: The case of  $^{204}\text{At}$ "*, **D. Kanjilal**, **International Journal of Modern Physics E** **33** (2024), 2450020.
- ii) *"High-spin states of  $^{204}\text{At}$ : isomeric states and shears band structure"*, **D. Kanjilal**, S. K. Dey, S. S. Bhattacharjee, A. Bisoi, M. Das, C. C. Dey, S. Nag, R. Palit, S. Ray, S. Saha, J. Sethi, and S. Saha, **Eur. Phys. J. A** **58** (2022), 159.
- iii) *"Spectroscopic study of  $^{38}\text{K}$  above the 31.67  $\mu\text{s}$  isomer"*, Rozina Rahaman, Abhijit Bisoi, Y. Sapkota, Anik Adhikari, Ananya Das, S. Sarkar, M. Saha Sarkar, A. Goswami, S. Ray, M. Roy Basu, **Debasmita Kanjilal**, Somnath Nag, K. Selvakumar, N. Madhavan, S. Muralithar, and R. K. Bhowmik, **Phys. Rev. C** **102** (2020), 024315.
- iv) *"Nuclear Data Sheets for  $A = 218$ "*, Balraj Singh, M.S. Basunia, Murray Martin, E.A. McCutchan, Indu Bala, R. Caballero-Folch, Rhiann Canavan, Ritwika Chakrabarti, A. Chekhovska, M.M. Grindler, Samra Kaim, **Debasmita Kanjilal**, D. Kasperovych, M.J. Kobra, H. Koura, Soumen Nandi, Adina Olacel, Abhilasha Singh, and B.P.E. Tee, **Nuclear Data Sheets** **160** (2019) 405-471.
- v) *"Superdeformation and  $\alpha$ -cluster structure in  $^{35}\text{Cl}$ "*, Abhijit Bisoi, M. Saha Sarkar, S. Sarkar, S. Ray, M. Roy Basu, **D. Kanjilal**, Somnath Nag, K. Selvakumar, A. Goswami, N. Madhavan, S. Muralithar, and R. K. Bhowmik, **Phys. Rev. C** **88** (2013), 034303.
- vi) *"First observation of high spin states and isomeric decay in  $^{210}\text{Fr}$ "*, **D. Kanjilal**, S. Saha, S. Bhattacharya, A. Goswami, R. Kshetri, R. Raut, S. Muralithar, R. P. Singh, G. Mukherjee and B. Mukherjee, **Phys. Rev. C** **84** (2011), 064321.
- vii) *"High spin states and isomeric decays in doubly-odd  $^{208}\text{Fr}$ "*, **D. Kanjilal**, S. Bhattacharya, A. Goswami, R. Kshetri, R. Raut, S. Saha, R. K. Bhowmik, J. Gehlot, S. Muralithar, R. P. Singh, G. Janeswari, G. Mukherjee, B. Mukherjee, **Nucl. Phys. A** **842** (2010), 1-14.
- viii) *"Electric field distribution and simulation of avalanche formation due to the passage of heavy ions in a parallel grid avalanche counter"*, **D. Kanjilal** and S. Saha, **Pramana** **72** (2009), 833-844.
- ix) *"An active drop counting device using condenser microphone for superheated emulsion detector"*, Mala Das, A. S. Arya, C. Marick, **D. Kanjilal** and S. Saha, **Rev. Sci. Instr.** **79** (2008), 113301.

## 11. Chapter Published in Book:

- i) "*Approaching the end of Mendeleev's Periodic Table: Super Heavy Elements*" in **Emerging Trends in Science, Social Science, Engineering and Management- A Multidisciplinary Approach**, Dr. M. A. Raffey (eds.), Red'shine Publication, London, UK., 2023, **pp. 373-386, ISBN: 978-1-387-57678-4.**
- ii) "*Impact of Environmental Radio Activity on Human*" in **Recent Trends in Multidisciplinary Research and Development**, Dr. M. A. Raffey (eds.), Red'shine Publication, 62/5834 Harplingegränd 110, LGH 1103. Älvsjö, 12573 Stockholm, Sweden, **pp. 460-474, ISBN: 978-91-89764-56-9.**

12. **Paper presentation in National / International Seminar / Conference / Workshop / School :**

- i) "Search for multiquasiparticle shears structure in  $^{204}\text{At}$ " in **Joint ICTP-IAEA Workshop on Simulation of Nuclear Reaction Data with the TALYS Code** held at **The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy**, October 16-20, 2023.
- ii) "Investigation of high spin states and shears band structure of  $^{204}\text{At}$ " at **The Fifth International Conference on 'Application of RadioTracers and Energetic Beams in Sciences, ARCEBS-2023'** held at **Sidho-Kanho-Birsha University, W. B., India**, in collaboration with **International Atomic Energy Agency**, January 31 - February 05, 2023.
- iii) "Exploration of magnetic Rotational band structure and new isomeric level in doubly odd  $^{204}\text{At}$ " at **International Conference on 'Recent Issues in Nuclear and Particle Physics (RINP2)'** held at **Department of Physics, Visva-Bharati, Santiniketan, India**, February 3-5, 2019.
- iv) "Investigation of magnetic rotational band structure and new isomeric level in  $^{204}\text{At}$ " in **Joint ICTP-IAEA Workshop on 'Nuclear Structure and Decay Data: Theory, Experiment and Evaluation'** held at **The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy**, October 15-26, 2018.
- v) Nuclear Physics Experiments and Data Analysis at SHELS Separator held at **FLNR, JINR, Dubna, Russia**, October 2-12, 2017.
- vi) "Observation of band structure and new isomeric levels in  $^{204}\text{At}$ " at **DAE-BRNS Symposium on Nuclear Physics** held at **Saha Institute of Nuclear Physics, Kolkata, India**, December 5-9, 2016.
- vii) "High spin states in  $^{205}\text{At}$ " at **DAE-BRNS International Symposium on Nuclear Physics** held at **Bhabha Atomic Research Centre (BARC), Trombay, Mumbai, India**, December 2-6, 2013.
- viii) "High spin states in  $^{204}\text{At}$ " at **DAE-BRNS Symposium on Nuclear Physics**, held at **Department of Nuclear Physics, Andhra University, Visakhapatnam, A. P., India**, December 26-30, 2011.
- ix) "Investigation of the high spin states in trans-lead nuclei" at Reserach Scholars Workshop, held at **UGC-DAE CSR, Kolkata centre, India**, January 6 -7, 2011.
- x) "Investigation of high spin states and isomeric decays in doubly odd  $^{210}\text{Fr}$ ", at **DAE-BRNS Symposium On Nuclear Physics**, held at **Birla Institute of Technology & Science, Pilani, Rajasthan, India**, December 20-24, 2010.
- xi) "Observation of excited states and isomeric decays in doubly-odd  $^{208,210}\text{Fr}$ " at **XLV Zakopane Conference on "Nuclear Physics: Extremes of**

- the Nuclear Landscape**”, held at **Zakopane, Poland**, August 30-September 5, 2010.
- xii) “Observation of excited states and isomeric decays in doubly-odd  $^{208}\text{Fr}$ ” at **DAE-BRNS International Symposium on Nuclear Physics**, held at **Bhabha Atomic Research Centre (BARC), Trombay, Mumbai, India**, December 8-12, 2009.
  - xiii) “Investigation of excited states and isomer decay in doubly odd  $^{208}\text{Fr}$ ” at **DAE-BRNS Symposium on Nuclear Physics**, held at **Indian Institute of Technology, Roorkee, India**, December 22-26, 2008.
  - xiv) “Spectroscopy of trans-lead Nuclei” in **SERC School** on ”Exploring Symmetries in Nuclei using the national Accelerator Facilities” held at **Inter University Accelerator Centre (IUAC), New Delhi, India**, September 1-21, 2008.
  - xv) “Simulation studies of avalanche formation and propagation in a Parallel Grid Avalanche Counter” at **DAE-BRNS Symposium on Nuclear Physics**, held at **Sambalpur University, Burla, Orissa, India**, December 11-15, 2007.
  - xvi) “A segmented annular avalanche counter for evaporation residue and measurements” at **DAE-BRNS Symposium on Nuclear Physics**, held at **The Maharaja Sayajirao University of Boroda, Vadodara, India**, December 11-15, 2006.

### 13. Participation in Workshop/ Conference/ Seminar/ School:

- i) ‘Joint ICTP-IAEA Nuclear Knowledge Management School’ at **The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy**, September 30 to October 04, 2024.
- ii) Theme Meeting on ‘Nuclear Lifetimes, Transitions and Moments (NLTM2022)’ at **Variable Energy Cyclotron Centre (VECC), Department of Atomic Energy, India**, February 1-3, 2022.
- iii) Workshop on ‘Career Development for Women in Physics’ at **The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy**, November 17-19, 2021.
- iv) 5th School cum Workshop on ‘Low Energy Nuclear Astrophysics (SLENA)’ at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, February 10-14, 2020.
- v) 4th School cum Workshop on ‘Low Energy Nuclear Astrophysics’ at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, November 26-29, 2012.

- vi) International Symposium on 'Accelerator and Radiation Physics' at **Saha Institute of Nuclear Physics (SINP), Kolkata, India** February 16-18, 2011.
- vii) 3rd School cum Workshop on 'Low Energy Nuclear Astrophysics' at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, November 15-19, 2010.
- viii) DAE-BRNS Theme Meeting on 'Advanced Detectors for Imaging in Physics and Medical Diagnosis' at **Variable Energy Cyclotron Centre (VECC), Kolkata, India**, March 4-5, 2010.
- ix) National Conference on 'X-Ray Fluorescence (XRF 2010)' at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, January 12-15, 2010.
- x) DAE-BRNS Workshop on 'Cyclotrons: Rising Expectations and Mounting Challenges' at **Variable Energy Cyclotron Centre (VECC), Kolkata, India**, June 25-26, 2008.
- xi) 2nd School cum Workshop on 'Low Energy Nuclear Astrophysics at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, February 19-22, 2008.
- xii) 17th National Symposium on 'Radiation Physics' at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, November 14-16, 2007.
- xiii) DAE-BRNS Workshop on 'Ion Beams at VECC and their Applications in Basic and Applied Sciences' at **Variable Energy Cyclotron Centre (VECC), Kolkata, India**, September 12-14, 2007.
- xiv) Workshop on 'Nuclear Physics with LINAC beams' at **Inter University Accelerator Centre (IUAC), New Delhi, India**, September 14- 15, 2006.
- xv) SERC School on 'Nuclear Dynamics at Low and Medium Energies and Nuclear Structure' at **Variable Energy Cyclotron Centre (VECC), Kolkata, India**, March 13 – April 2, 2006.
- xvi) School cum Workshop on 'Low Energy Nuclear Astrophysics' at **Saha Institute of Nuclear Physics (SINP), Kolkata, India**, January 16-20, 2006.

#### 14. Conference and symposium proceedings :

- i) *Investigation of High Spin States and Shears Band Structure of  $^{204}\text{At}$* , **D. Kanjilal**, S. K. Dey, S. Saha, M. Das, C. C. Dey, S. Ray, A. Bisoi, S. Nag, R. Palit, and S. Saha, The Fifth International Conference on Application of RadiotraCers and Energetic Beams in Sciences (ARCEBS 2023) **6**, 123 (2023).

- ii) *"Spectroscopic study of  $^{32}\text{S}$ "*, Ananya Das, Abhijit Bisoi, S. Ray, M. Roy Basu, **D. Kanjilal**, S. Nag, K. Selva Kumar, A. Goswami, N. Madhavan, S. Muralithar, R. K. Bhowmik, and S. Sarkar, Proc. DAE Symp. on Nucl. Phys. **64**, 200 (2019).
- iii) *"Observation of band structure and new isomeric levels in  $^{204}\text{At}$ "*, S. K. Dey, **D. Kanjilal**, A. Bisoi, Mala Das, C. C. Dey, S. Ray, R. Palit, S. Saha, J. Sethi, S. Nag, and S. Saha, Proc. DAE-BRNS Symp. on Nucl. Phys. **61**, 256 (2016).
- iv) *"High spin states in  $^{38}\text{K}$ "*, Abhijit Bisoi, S. Ray, M. Roy Basu, **D. Kanjilal**, S. Nag, K. Selva Kumar, A. Goswami, N. Madhavan, S. Muralithar, R. K. Bhowmik, S. Sarkar, and M. Saha Sarkar, Proc. DAE-BRNS Symp. on Nucl. Phys. **61**, 106 (2016).
- v) *"High spin states in  $^{205}\text{At}$ "*, **D. Kanjilal**, A. Bisoi, M. Das, C. C. Dey, S. Ray, R. Palit, S. Saha, J. Sethi, T. Trivedi, S. Nag, S. Bhattacharya, and S. Saha, Proc. DAE Symp. on Nucl. Phys. **58**, 264 (2013).
- vi) *"High spin states in  $^{204}\text{At}$ "*, **D. Kanjilal**, A. Bisoi, M. Das, C. C. Dey, A. Goswami, S. Ray, R. Palit, S. Saha, J. Sethi, T. Trivedi, S. Nag, S. Bhattacharya, and S. Saha, Proc. DAE Symp. on Nucl. Phys. **56**, 438 (2011).
- vii) *"Investigation of high spin states and isomeric decays in doubly-odd  $^{210}\text{Fr}$ "*, **D. Kanjilal**, S. Bhattacharya, A. Goswami, R. Kshetri, S. Saha, R. Raut, R. K. Bhowmik, J. Gehlot, S. Muralithar, R. P. Singh, G. Mukherjee, and B. Mukherjee, Proc. DAE Symp. on Nucl. Phys. **55**, 16 (2010).
- viii) *"Are there Super-deformed states in  $^{35}\text{Cl}$ ?"*, A. Bisoi, S. Ray, M. Roy Basu, **D. Kanjilal**, S. Nag, K. Selva Kumar, A. Goswami, N. Madhavan, S. Muralithar, R. K. Bhowmik, S. Sarkar and M. Saha Sarkar, Proc. DAE Symp. on Nucl. Phys. **55**, 4 (2010).
- ix) *"Observation of excited states and isomeric decays in doubly-odd  $^{208}\text{Fr}$ "*, **D. Kanjilal**, S. Bhattacharya, R. K. Bhowmik, J. Gehlot, A. Goswami, G. Janeswari, R. Kshetri, B. Mukherjee, G. Mukherjee, S. Muralithar, R. Raut, R. P. Singh and S. Saha, Proc. DAE-BRNS International Symp. on Nucl. Phys. **54**, 102 (2009).
- x) *"Transition rates in mirror nuclei  $^{35}\text{Ar}$  and  $^{35}\text{Cl}$ "*, Sudatta Roy, Moumita Roy Basu, Abhijit Bisoi, **Debasmita Kanjilal**, Somnath Nag, K. Selva Kumar, Asimananda Goswami, N. Madhavan, S. Muralithar, R. K. Bhowmik, Sukhendusekhar Sarkar, M. Saha Sarkar, Proc. DAE-BRNS International Symp. on Nucl. Phys. **54**, 56 (2009).
- xi) *"Investigation of excited states and isomer decay in doubly odd  $^{208}\text{Fr}$ "*, **D. Kanjilal**, S. Bhattacharya, R. K. Bhowmik, J. Gehlot, A. Goswami, G. Janeswari, R. Kshetri, B. Mukherjee, G. Mukherjee, S. Muralithar, R. Raut, R. P. Singh and S. Saha, Proc. DAE Symp. on Nucl. Phys. **53**, 265 (2008).



- xii) *“Spectroscopy of  $^{37}\text{Ar}$ ,  $^{36}\text{Cl}$  and the role of fp orbitals”*, Sudatta Ray, I. Ray, Ritesh Kshetri, R. Raut, S. Ganguly, M. K. Pradhan, **D. Kanjilal**, M. Ray Basu, A. Chakraborty, Krishichayan, A. Mukherjee, G. Ganguly, S. S. Ghugre, S. Bhattacharya, P. Banerjee, A. Goswami, A. Deo, S. Kumar, H. C. Jain, I. Mazumdar, R. Palit, S. Sarkar, M. Saha Sarkar, Proc. DAE Symp. on Nucl. Phys., **53**, 353 (2008).
- xiii) *“Simulation studies of avalanche formation and propagation in a Parallel Grid Avalanche Counter”*, **D. Kanjilal**, M. Das, S. Saha, Proc. DAE Symp. on Nucl. Phys., **52**, 613 (2007).
- xiv) *“A segmented annular avalanche counter for evaporation residue and measurements”*, **D. Kanjilal**, Mala Das, C. Marick and S. Saha, Proc. DAE-BRNS Symp. on Nucl. Phys., **51**, 622 (2006).
- xv) *“Investigation on R134a as a sensitive liquid for superheated drop emulsion detector”*, Mala das, R. sarkar, P. K. Mondal, **D. Kanjilal**, S. Saha, S. C. Roy, Proc. DAE-BRNS Symp. on Nucl. Phys., **51**, 628 (2006).

## 15. Administrative Experience :

- i) Head of the Department of Physics at Raiganj Surendranath Mahavidyalaya since joining in April, 2017.
- ii) Member of Project Monitoring Unit of RUSA 2.0 scheme at Raiganj Surendranath Mahavidyalaya since 20th November, 2017.
- iii) Convener of Library Committee at Raiganj Surendranath Mahavidyalaya since March, 2022.
- iv) Member of Admission Committee at Raiganj Surendranath Mahavidyalaya since March, 2022.
- v) Member of Internal Quality Assurance Cell at Raiganj Surendranath Mahavidyalaya since June, 2023.

16. **Declaration :** I hereby confirm that the particulars mentioned above are true and correct to the best of my knowledge and belief.

*Sobarnita Bondyopasthaya*