

CURRICULUM VITAE



Residential Address: Vill+P.O.-Salboni
Dist-Bankura, W.B
Pin-722102, India

Office Address: Bankura Sammilani College
Department of Chemistry
Kenduadihi, Bankura-722102, WB

Personal Details

Name	Dr. Swadesh Mandal
Fathers Name	Mr. Niranjan Mandal
Date of Birth	4 th May 1982
Contact Number	+919474561619
E-mail	swadeshchem@rediffmail.com
Marital Details	Married
Nationality	Indian

Educational Details

Examination	Year of passing	Board/University	Division
Ph.D	2013	Jadavpur University, Kolkata	-
Post M.Sc. (Course work)	2007-08	Saha Institute of Nuclear Physics	1 st
M.Sc (Chemistry)	2006	The University of Burdwan	1 st
B.Sc. (Chemistry)	2004	The University of Burdwan	1 st
10+2 (Science)	2000	West Bengal Council of Higher Secondary Education (WBCHSE)	1 st
10	1998	West Bengal Board of Secondary Education (WBBSE)	1 st

Specialization

Nuclear and Analytical Chemistry

Field of Work Nuclear and Radiochemistry, Speciation, Separation, Nanoscience

Research Experience
(Saha Institute of Nuclear Physics, 1/AF Bidhannagar, Kolkata, India)

2012-2013	Research Associate
2009-20012	Senior Research Fellow
2007-2009	Junior Research Fellow (Including c year Post M.Sc. Course)

Teaching Experience
(College/ University)

Dumkal College Department of Chemistry Basantapur, Murshidabad	Assistant Professor (01.04.2015-08.07.2017) Assistant Professor
Bankura Sammilani College Department of Chemistry Kenduadihi, Bankura	09.07.2017-continue

Scientific Activity

Thesis Title SPECIES DEPENDENT STUDIES OF TRACE LEVEL MOLYBDENUM, IODINE AND MERCURY EMPLOYING NUCLEAR AND ANALYTICAL TECHNIQUES

Thesis Work

My Ph.D work was carried out in the field of radioanalytical chemistry. The radioanalytical methods and green chemistry principles was adopted to examine the efficacy of environmentally benign reagents, such as biopolymers or non-ionic surfactants in extracting no-carrier-added (nca) radionuclides of molybdenum, iodine and mercury. Production and separation of nca radionuclide was the main focusing part of my Ph.D thesis. However, 'nanoparticle' synthesis is very demanding for the modern science; therefore, in my thesis work I made an effort to synthesis molybdenum nanoparticle using in-situ gamma radiation.

Project Work during Ph.D

I was involved to the Indo-Hungarian Project work (DST/INT/HUN/P-16/06). In 2009, I have visited Atomki, Debrescen, Hungary for the determination of selenium in the soil or plants using ICP-MS or ICP-OES.

Future Plan

Separation and speciation of trace level of metal in soil, plants, foods, vegetables etc.
Biomonitoring study
Determination of trace level of heavy metal in environmental samples
Production and separation of radionuclides
Synthesis of various types of fluorescent nanoparticle and lanthanide doped nanoparticle for the determination of various heavy metals and biological samples as sensor.

Awards

National Eligibility Test (NET)(CSIR-UGC), 2006
Best Poster Presentation, NUCAR, Mithivai College, Mumbai, India, 2009

Other Activity

- 1. A member of Local Organizing committee of upcoming conference "Third International Conference on Application of Radiotracers in Chemical, Environmental and Biological Sciences (ARCEBS-14)", during 12-18 January, 2014 at Ffort Radission, Raichak.*
- 2. A member (Jt. Secretary) of organizing committee of "Second International Conference on Application of Radiotracers in Chemical, Environmental and Biological Sciences (ARCEBS-10)", during 7-13 November, 2010, Saha Institute of Nuclear Physics, Kolkata.*
- 3. Elements Speciation (SELS-08)", during 24-28th November, 2008 at Ffort Radission, Raichak.*

Publications

1. Swadesh Manda, Susanta Lahiri, A review on extraction, preconcentration and speciation of metal ions by sustainable cloud point extraction. *Microchemical Journal* 175(1)(2022)107150.
2. Swapnadip Roy, Swadesh Mandal, A brief review on nanoparticle based mercury sensing by optical method. *Journal of Scientific Enquiry* 1(2021)48-64
3. Swadesh Mandal, Nabanita Naskar, Ajoy Mandal, Kaustab Ghosh, Susanta Lahiri, Separation of ^{109}Cd impurity from a decayed $^{110\text{m}/108\text{m}}\text{Ag}$ source. *Journal of Radioanalytical and Nuclear Chemistry*.330(3)(2021) 1-44.
4. Swadesh Mandal, Ajoy Mandal: A simple and sensitive separation technique of ^{99}Mo and $^{99\text{m}}\text{Tc}$ from their equilibrium mixture. *Journal of Radioanalytical and Nuclear Chemistry*.301 (2014) 297.
5. Swadesh Mandal, Ajoy Mandal: Separation of no-carrier-added $^{99\text{m}}\text{TcO}_4^-$ from ^{99}Mo - $^{99\text{m}}\text{Tc}$ equilibrium mixture by PEG based aqueous biphasic separation technique using sodium/potassium salts of citric and tartaric acid. *Journal of Radioanalytical and Nuclear Chemistry*. 299 (2014) 1225.
6. Swadesh Mandal: Synthesis of Radioactive gold nanoparticle in surfactant medium. *Journal of Radioanalytical and Nuclear Chemistry*.299 (2014) 1209.
7. Swadesh Mandal, Susanta Lahiri: Cloud point extraction of ^{99}Mo with Triton X-114, *Journal of Radioanalytical and Nuclear Chemistry* 295 (2013) 1361.
8. Swadesh Mandal, Ajoy Mandal, Susanta Lahiri: Species dependent extraction of ^{99}Mo , *Journal of Radioanalytical and Nuclear Chemistry* 295 (2013) 861.
9. Swadesh Mandal, Susanta Lahiri: Synthesis of molybdenum nanoparticle by in situ γ -radiation, *Applied Radiation and Isotopes* 70 (2012) 2340.
10. Swadesh Mandal, Ajoy Mandal, Susanta Lahiri: Separation of nca $^{123,124,125,126}\text{I}$ from alpha particle induced the natural antimony trioxide target, *Journal of Radioanalytical and Nuclear Chemistry* 292 (2012) 579.

	<p>11. Swadesh Mandal, Susanta Lahiri: <i>Studies on dynamic dissociation constant of ^{99}Mo-insulin complex</i>, <i>Journal of Radioanalytical and Nuclear Chemistry</i> 292 (2012) 859.</p> <p>12. Swadesh Mandal, Dalia Nayak: <i>Species dependent studies of no-carrier-added $^{93\text{m}}\text{Mo}$: A green method</i>, <i>Applied Radiation and Isotopes</i> 68 (2010) 1892.</p> <p>13. Swadesh Mandal, Dalia Nayak: <i>Production, separation and speciation of no-carrier-added Hg radionuclides using greener methodologies</i>, <i>Radiochimica Acta</i> 98 (2010) 45.</p>
--	--

<p>Article in Conference</p>	<p>1. Swadesh Mandal, Ajoy Mandal, <i>Separation of $^{99\text{m}}\text{Tc}$ from ^{99}Mo-$^{99\text{m}}\text{Tc}$ by SnCl_2 and determination of dynamic dissociation constant of $^{99\text{m}}\text{Tc}$-PVP. One day National seminar (UGC sponsored) "Recent Advances in Chemistry" 21st December 2015, Sripat Singh College, Murshidabad, West Bengal.</i></p> <p>2. Swadesh Mandal, Ajoy Mandal, Susanta Lahiri, "Speciation dependent extraction studies of ^{99}Mo and $^{99\text{m}}\text{Tc}$ and their separation from ^{99}Mo-$^{99\text{m}}\text{Tc}$ equilibrium mixture" SESTEC-2012, SVKM'S Mithibai College, Mumbai, 27 Feb-1 March January, 2012.</p> <p>3. Swadesh Mandal and Susanta Lahiri, "Synthesis of Molybdenum nanoparticle by in situ γ radiation" 3rd International Nuclear Chemistry Congress-3rd INCC, Città del Mare, Terrasini - Palermo - Sicily - Italy, 18-23 September, 2011.</p> <p>4. Swadesh Mandal and Susanta Lahiri, "Studies on the extraction behaviour of no-carrier-added $^{195,195\text{m},197\text{m}}\text{Hg}$ by different cloud forming agents", <i>Second International Conference on Application of Radiotracers in Chemical, Environmental and Biological Sciences (ARCEBS-10)</i>, Saha Institute of Nuclear Physics, Kolkata, 7-13 November, 2010.</p> <p>5. Swadesh Mandal, Dalia Nayak, "Surfactant mediated synthesis of nano-sized molybdenum oxide using gamma radiation", <i>National Seminar on Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structure Evaluation</i>, University of Burdwan, Burdwan, 20-22 February, 2009.</p> <p>6. Swadesh Mandal, Dalia Nayak, "A study of dissociation constant of ^{99}Mo-insulin complex as anti-diabetic complex", <i>Nuclear and Radiochemistry Symposium (NUCAR-2009)</i>, SVKM'S Mithibai College,</p>
-------------------------------------	---

Mumbai, 7-10 January, 2009.

- 7. Swadesh Mandal, Dalia Nayak, "An attempt to study the speciation of ⁹⁹Mo with green reagent", National Seminar on Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structure Evaluation, University of Burdwan, Burdwan, 25-27 April, 2008.*