

DR. SHIB SHANKAR DASH

ASSISTANT PROFESSOR

M.Sc., Ph.D. (Chemistry)

E-mail: shiba.chem@gmail.com

Phone: 09679615004



Address : Vill. + P.O. + P.S. - Mohanpur
Dist- Paschim Medinipur, W.B., Pin- 721436

Father's Name : Late Susanta Dash

Date of Birth : 13.01.1987.

Sex : Male

Nationality : Indian

Marital Status : Married

EDUCATIONAL QUALIFICATION

❖ Ph.D. in Chemistry (January, 2015)

Vidyasagar University, Midnapore, W.B.

- **Title of the Thesis:** Utilization of Plant metabolites as Renewables: Self-Assembly Studies of Nano-sized Triterpenoids Betulin, Betulinic acid and its Esters and Green Synthesis of Gold Nanoparticles
- **Supervisor:** Professor Braja Gopal Bag, Professor, Department of Chemistry, Vidyasagar University, Midnapore.

❖ M.Sc. in Chemistry (2009)

Vidyasagar University, Midnapore, W.B.

- **Specialization:** Organic Chemistry

❖ B.Sc. in Chemistry (2007)

Midnapore Day College, Vidyasagar University, Midnapore

AWARDS

- ❖ NET CSIR awarded in CSIR-UGC NET Examination held on 21.12-.2008.
- ❖ GATE rank – 89 with a Percentile Score – 98.68 held on 08.02.2009.
- ❖ Silver medal for the second (2nd) rank in M.Sc from Vidyasagar University in Chemistry in the year 2009.

TEACHING

- ❖ **July 2016 to Present:**
Assistant Professor in Chemistry, Govt. General Degree College, Salboni, Paschim Medinipur
- ❖ **December 2015 to July 2016:**
Assistant Professor in Chemistry, Govt. General Degree College, Kharagpur-II, Paschim Medinipur

LIST OF PUBLICATIONS

- ❖ B. G. Bag, **S. S. Dash**, First self-assembly study of betulinic acid, a renewable nano-sized, 6-6-6-6-5 pentacyclic monohydroxy triterpenic acid, *Nanoscale*, 2011, 3, 4564-4566.
- ❖ **S. S. Dash**, B. G. Bag, Synthesis of gold nanoparticles using renewable *Punica granatum* juice and study of its catalytic activity, *Appl. Nanosci*, 2014, 4, 55-59.
- ❖ **S. S. Dash**, B. G. Bag, P. Hota, *Lantana camara* Linn leaf extract mediated green synthesis of gold nanoparticles and study of its catalytic activity, *Appl. Nanosci*, 2015, 5, 343-350.
- ❖ **S. S. Dash**, R. Majumdar, A. K. Sikder, B.G. Bag, B. K. Patra, Green Synthesis of Polyshaped Gold Nanoparticles Using Renewable *Saraca Indica* Bark Extract, *Applied Nanoscience*, 2014, 4, 485-490.
- ❖ **S. S. Dash**, A. K. Sikder, B. G. Bag, S. Bandyopadhyay, *Phoenix dactylifera* (Date Palm) Seed Extract Mediated Green Synthesis of Gold Nanoparticles and its Application as a Catalyst for the Reduction of 4-nitrophenol to 4-aminophenol, *Int. J. Nanomat. Biostruc*, 2013, 3, 42-46.

- ❖ B. G. Bag, **S. S. Dash**, S. K. Patra, Study of Antioxidant Property of the Pseudobulb Extract of *Crepidium acuminatum* (Jeevak) and its use in the Green Synthesis of Gold nanoparticles, *Int. J. Res. Chem. Environ.*, 2014, 4, 133-138.
- ❖ B. G. Bag, **S. S. Dash**, A. Roy, Study of Antioxidant Property of the Rhizome Extract of *Roscoea purpurea* Sm.(Kakoli) and its use in Green Synthesis of Gold nanoparticles, *Int. J. Res. Chem. Environ.*, 2014, 4, 174-180.
- ❖ B. G. Bag, **S. S. Dash**, Hierarchical Self-Assembly of a Renewable Nanosized Pentacyclic Dihydroxy-triterpenoid Betulin Yielding Flower-Like Architectures, *Langmuir*, 2015, 31, 13664–13672.
- ❖ B. G. Bag, **S. S. Dash**, Self-assembly of sodium and potassium betulinates into hydro- and organo-gels: entrapment and removal studies of fluorophores and synthesis of gel-gold nanoparticle hybrid materials, *RSC Adv.*, 2016, 6, 17290-17296.
- ❖ S. K. Dash, **S. S. Dash**, S. Chattopadhyay, T. Ghosh, S. Tripathy, S. K. Mahapatra, B. G. Bag, D. Das and S. Roy, Folate decorated delivery of self assembled betulinic acid nano fibers: a biocompatible antileukemic therapy, *RSC Adv.*, 2015, 5, 24144-241157.
- ❖ S. K. Dash, S. Chattopadhyay, T. Ghosh, **S. S. Dash**, S. Tripathy, B. Das, B. G. Bag, D. Das and S. Roy, Self-assembled betulinic acid protects doxorubicin induced apoptosis followed by reduction of ROS–TNF- α –caspase-3 activity, *Biomedicine & Pharmacotherapy*, 2015, 72, 144–157.
- ❖ S. K. Dash, S. Chattopadhyay, S. Tripathy, **S. S. Dash**, B. Das, D. Mandal, S. K. Mahapatra, B. G. Bag and S. Roy, Self-assembled betulinic acid augments immunomodulatory activity associates with IgG response, *Biomedicine & Pharmacotherapy*, 2015, 75, 205–217.
- ❖ S. K. Dash, S. Chattopadhyay, **S. S. Dash**, S. Tripathy, B. Das, S. K. Mahapatra, B. G. Bag, P. Karmakar and S. Roy, Self assembled nano fibers of betulinic acid: A selective inducer for ROS/TNF- α pathway mediated leukemic cell death, *Bioorganic Chemistry*, 2015, 63, 85–100.
- ❖ B. G. Bag, **S. S. Dash**, Hierarchical Self-Assembly of a Renewable Nanosized Pentacyclic Dihydroxy-triterpenoid Betulin Yielding Flower-Like Architectures, *Langmuir*, 2015, 31, 13664-13672.
- ❖ B. G. Bag, **S. S. Dash**, Self-assembly of sodium and potassium betulinates into hydro- and organo-gels: entrapment and removal studies of fluorophores and synthesis of gel-gold nanoparticle hybrid materials, *RSC Advances*, 2016, 06, 17290-17296.
- ❖ **S. S. Dash**, Rapid biosynthesis of *Areca nut* seed extract mediated gold nanoparticles and its use in catalytic reduction of 4-nitrophenol to 4-aminophenol, *Asian J. Pharm. Pharmacology*, 2019, 05, 895-900.
- ❖ **S. S. Dash**, S. Samanta, S. Dey, B. Giri, S. K. Dash, Rapid Green Synthesis of Biogenic Silver Nanoparticles Using *Cinnamomum tamala* Leaf Extract and its Potential Antimicrobial Application Against Clinically Isolated Multidrug-Resistant Bacterial Strains, *Biol Trace Elem Res*, 2020, 198, 681-696.

- ❖ **S. S. Dash**, I. K. Sen, & S. K. Dash, A review on the plant extract mediated green syntheses of gold nanoparticles and its anti-microbial, anti-cancer and catalytic applications. *Int Nano Lett*, 2022, **12**, 47–66.
- ❖ **S. S. Dash**, J. Banerjee, S. Samanta, *et al.* Microwave-Assisted Fabrication of Silver Nanoparticles Utilizing Seed Extract of *Areca catechu* with Antioxidant Potency and Evaluation of Antibacterial Efficacy Against Multidrug Resistant Pathogenic Bacterial Strains. *BioNanoSci.* 2022, **12**, 210–227.

List of Abstracts Published in the National and International Conferences

- ❖ **S. S. Dash**, S. Das, B. G. Bag, Chemistry of Renewable Nanos: Self-Assembly of betulinic acid and betulin in organic liquids yielding Nano to Micro-sized architectures, ICCB-2014, held at IICT, Hyderabad.
- ❖ **S. S. Dash**, B. G. Bag, Chemistry of Renewable Nanos: Self-Assembly of betulinic acid and betulin yielding Nano to Micro-sized architectures, FCS-14 held at Vidyasagar University.
- ❖ **S. S. Dash**, K. Paul, B. G. Bag, Chemistry of Renewable Nanos: Self-Assembly of Triterpenoids in Organic Liquids yielding nano to micro-sized architectures, NSC-15 held at BHU on Feb 1-3, 2013.
- ❖ **S. S. Dash**, B. G. Bag, Self-Assembly Studies of Renewable Nano Triterpenoids Betulin and Betulinic acid and Green Synthesis of Gold Nanoparticles, FCS-13 held at Vidyasagar University.
- ❖ **S. S. Dash**, K. Paul, B. G. Bag, Chemistry of Renewable Nanos: Self-Assembly of Triterpenoids in Organic Liquids, NSC-14 held at NIIST, Trivandrum on Feb 1-3, 2012.
- ❖ **S. S. Dash**, B. G. Bag, Chemistry of Renewable Nanos: Self-Assembly of Betulinic acid in Organic Liquids, FCS-12 held at Vidyasagar University.
- ❖ B. G. Bag, R. Majumdar, S. K. Dinda, **S. S. Dash**, K. Paul, A. Dey., Natural Triterpenoids as Renewable Nanos: Formation of Helical Nano-Fibers, Nano vesicles, Nano- Spheres and Dynamic Soft Materials., POC 2012, 14th IUPAC Conference On Polymers and Organic Chemistry held on DOHA, QATAR.
- ❖ B. G. Bag, P. P. Dey, R. Majumdar, S. K. Dinda, **S. S. Dash**, Arjunolic acid: The first Renewable-Nano Triterpenoid in Bioorganometallics, ISBOMC-10 held at Ruhr University Bochum, Germany.
- ❖ B. G. Bag, R. Majumdar, S. K. Dinda, **S. S. Dash**, K. Paul, Natural Triterpenoids as Renewable Nanos: Current Status and Future Prospects., Humboldt Kolleg and International Conference Recent Advancements in Earth Resources Research: The Road to the Future.