

## CV For Departmental Profile

### Dr. SURAJIT JANA

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### PERSONAL INFORMATION

Age : 38 yrs  
Sex : Male  
Nationality : Indian  
Marital Status : Married

### ACADEMIC HISTORY

**Ph.D.** – 14.12.2006 from Westfälische Wilhelms-Universität Münster, Germany (Supervisor: Prof. Norbert W. Mitzel)

**M.Sc.** – May 2003 in Chemistry (Specialization: Inorganic Chemistry) from Indian Institute of Technology (IIT), Bombay, India

### PROFESSIONAL EXPERIENCE

**5.5.2010- till date: Assistant Professor** at Asansol Girls' College, Asansol (affiliated to Burdwan University)

**2009- 2010: Research Fellow**, National University of Singapore, Singapore (Supervisor: Dr. Han Vinh Huynh)

**2008-2009: Senior Research Associate**, University of East Anglia, UK (Supervisor: Dr. Carl Redshaw)

**2007-2008: Post-doctoral Research Assistant**, Technische Universität-Berlin, Germany (Supervisor: Prof. Matthias Driess)

### RESEARCH SUMMARY

My research experience as a part of my PhD and Post-Doc work was in Inorganic chemistry with specific emphasis on organometallic precursor chemistry for nano-material synthesis and H<sub>2</sub> absorption properties. The research work during my PhD was mainly synthesis of organometallic hydrazides, alkoxides, hydroxylamides or mixed hydrazide/alkoxides, hydrazide/hydroxylamides complexes of group 12 metals (particularly Zn) in defined mixed aggregates, containing defined Zn/O/N ratios. Later in postdoctoral study, I worked with precursor compounds with Zn/O/M (M = alkaline earth or transition metal) and their decomposition towards metal-doped ZnO syntheses. I also experienced on synthesis of organometallic cage as well as MOF compounds for hydrogen storage application. During my master's study at IIT Bombay, my project was on porphyrin chemistry which is basically simple organic synthesis using various kinds of chromatographic techniques.

## RESEARCH PUBLICATIONS

1. “Zinc hydrazides and alkoxy-hydrazides - organometallic compounds with novel  $Zn_4N_8$ ,  $Zn_4N_6O$  and  $Zn_4N_4O_2$  cage structures” **S. Jana**, R. Fröhlich, N. W. Mitzel, *Chem. Eur. J.*, **2006**, *12*, 592.
2. “Organozinc siloxy-hydrazide aggregates  $[(RZn)_4(NHNMe_2)_x(OSiMe_3)_{(4-x)}]$ ” **S. Jana**, R. Fröhlich, N. W. Mitzel, *Z. Naturforsch.*, **2006**, *61b*, 838.
3. “Zinc hydrazide and alkoxide hydrazide zinc cages with  $Zn_4N_8$  and  $Zn_4N_6O$  cores – cluster isomerism as a result of subtle ligand size changes” **S. Jana**, R. Fröhlich, N. W. Mitzel, *Eur. J. Inorg. Chem.*, **2006**, 3936.
4. “First mixed hydrazide/hydroxylamide metal aggregates” **S. Jana**, R. J. F. Berger, R. Fröhlich, N. W. Mitzel, *Chem. Commun.*, **2006**, 3993.
5. “Oxygenation of simple zinc alkyls: surprising dependence of product distributions on the alkyl substituents and the presence of water” **S. Jana**, R. J. F. Berger, R. Fröhlich, T. Pape, N. W. Mitzel, *Inorg. Chem.*, **2007**, *46(10)*, 4293.
6. “Simple methylcadmium alkoxides” **S. Jana**, T. Pape, N. W. Mitzel, *Z. Naturforsch.*, **2007**, *62b*, 1339.
7. “An organocadmium hydroxylamide” **S. Jana**, R. Fröhlich, A. Hepp, N. W. Mitzel, *Organometallics*, **2008**, *27(6)*, 1348.
8. “Zinc hydrazides and hydrazide-alkoxides with cyclic and acyclic hydrazide substituents” **S. Jana**, R. Fröhlich, N. W. Mitzel, *Z. Anorg. Allg. Chem.*, **2008**, *634*, 1477.
9. “An organo-zinc hydrazide-thiolate aggregate with  $Zn_3N_4S_2$  core” **S. Jana**, N. W. Mitzel, *Z. Naturforsch.*, **2009**, *64b*, 339.
10. “One-pot synthesis of lithium alkylzinc alkoxo with a  $LiZn_3O_4$  core as suitable organometallic precursors for Li-containing ZnO nanocrystals” **S. Jana**, Y. Aksu, M. Driess, *Dalton Trans.*, **2009**, 1516.
11. “Multinuclear zincpentafluorobenzene carboxylates: synthesis, characterization and hydrogen storage capability” C. Redshaw, **S. Jana**, C. Shang, M. R.J. Elsegood, X. Lu, Z. X. Guo, *Organometallics*, **2010**, *29(22)*, 6129.
12. “Enhancement of  $H_2$  uptake via fluorination but not lithiation for  $Zn_4N_8$  and  $Zn_4N_6O$  type clusters” C. Redshaw, **S. Jana**, C. Shang, M. R.J. Elsegood, X. Lu, Z. X. Guo, *Chem. Commun.*, **2010**, *46*, 9055.
13. “Organozinc hydroxylamides – On the bulk-dependant interplay of nuclearity, structure and dynamics” M. Ullrich, R. J. F. Berger, **S. Jana**, T. Pape, R. Fröhlich, N. W. Mitzel, *Dalton Trans.*, **2011**, *40*, 1144.
14. “Raman and photoluminescence spectroscopic detection of surface-bound  $Li^+O_2^-$  defect sites in Li-doped ZnO nanocrystals derived from molecular precursors” R. Kirste, Y. Aksu, M. R. Wagner, S. Khachadorian, **S. Jana**, M. Driess, C. Thomsen, A. Hoffmann, *Chem. Phys. Chem.*, **2011**, *12*, 1189.
15. “Basic Beryllium ortho-Fluorobenzoate and its Mono-hydroxo Derivative” R. J. F. Berger, **S. Jana**, R. Fröhlich, N. W. Mitzel, *Z. Naturforsch.*, **2011**, *66b*, 1131.
16. “Bis( $\mu$ -diisopropylhydroxylamino)- $\kappa^2O:N;\kappa^2O:O$ -bis[(diisopropylhydroxylamino- $\kappa O$ )beryllium]” R. J. F. Berger, **S. Jana**, U. Monkowius, N. W. Mitzel, *Acta Cryst.*, **2012**, *E68*, m1463.
17. “A Diethylhydroxylamine based mixed lithium/beryllium aggregate” R. J. F. Berger, **S. Jana**, R. Fröhlich, N. W. Mitzel, *Z. Naturforsch.*, **2015**, *70(4)*, 279.

## PATENT

1. “Method for producing mono-alkali metal zinc alkoxide cubanes” **S. Jana**, M. Driess, Y. Aksu, *PCT Int. Appl.*, **2009**, WO 2009141416 A2 20091126.

Conference proceedings and review publication:

1. “Swamiji’s Philosophy towards Science” S. Jana (Proceedings of UGC Sponsored National Seminar on Vivekana-nda’s Philosophy of Nationalism-a Review in 21<sup>st</sup> Century’ on 24<sup>th</sup> & 25<sup>th</sup> September, 2013 organised by Dept.of Political Science, Asansol Girls’ College) (ISBN NO : 978-81-923765-4-7).
2. “A Review on Organometallic M(I)–M(I) Single Bonded Chemistry of Group 2 and 12 Metals” S. Jana, The Beats of Natural Science, Vol-2, Issue-1, 2015 (ISSN: 2348-7615)

## PRESENTATIONS

### Oral Presentations (Selected):

1. S. Jana, N. W. Mitzel, R. Fröhlich “Synthesis of Organometallic Precursors for Metal Oxynitrides” Second Wintersymposium on Molecular Chemistry, Pitzal, Austria, February 14-21, 2004
2. S. Jana, R. Fröhlich, N. W. Mitzel “Organozinc Hydrazide-Alkoxides and Hydrazide-hydroxylamides” 11<sup>th</sup> International Symposium on Inorganic Ring Systems, Oulu, Finland, 30.7.-4.8.06.
3. S. Jana, N. W. Mitzel, M. Driess, C. Redshaw “Synthesis and Characterization of Organozinc Single-Source Precursors- Insight into Material Science” National Seminar at The University of Burdwan, 15<sup>th</sup>-17<sup>th</sup> March, 2011. (Invited Lecture)
4. S. Jana, M. Driess “Zn/Li Oxoclusters: Efficient Precursors for Li-doped ZnO Based Materials” National Seminar at Jadavpur University, 8<sup>th</sup>-9<sup>th</sup> July, 2011. (Invited Lecture)
5. S. Jana, N. W. Mitzel “Chemistry of Organozinc -Alkoxide, -Hydrazide, and -Hydroxylamide” National Seminar at Department of Chemistry, Deshabandhu Mahavidyalaya, 25<sup>th</sup>-26<sup>th</sup> November, 2011. (Invited Lecture)

### Poster Presentations (Selected):

1. S. Jana, N. W. Mitzel, R. Fröhlich “Organometallic Hydrazide/Alkoxide Zinc Clusters” OMCOS 13, IUPAC Symposium on Organometallic Chemistry - Directed Towards Organic Synthesis, Geneva, Switzerland, July 17-21, 2005.
2. S. Jana, N. W. Mitzel “Synthesis and Characterization of Mixed Hydrazide-Hydroxylamide Organozinc” UGC Sponsored and CSIR aided International Symposium (RTRC-2011), Department of Chemistry, Midnapore College, West Bengal, October 31-November 1, 2011.

## HONORS AND ACHIEVEMENTS

2008-2009	EPSRC Post-doctoral Grant (12 months)
2007-2008	DFG Grant for Post-doctoral Fellowship
2003-2006	Fellowship for PhD study under International Graduate School Program (GSC- MS) at Westfälische Wilhelms Universität Münster, Germany
2003	Qualified for NET-JRF (Dec, 2012) and GATE Examination
2002	Recipient of Madhav Pandey Fellowship from IIT Bombay
2002	Secured <b>Gold Medal</b> for Ranked 1 <sup>st</sup> in Vidyasagar University, West Bengal in B.Sc.(Honours in Chemistry)

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