UNIVERSITY OF CALCUTTA

FACULTY ACADEMIC PROFILE/ CV

Full name of the faculty member: Asish Ranjan Das

Designation: Professor

Specialisation : Organic Chemistry

Contact information : Department of Chemistry, University of Calcutta, Sir Rashbehari Shiksha Prangan, 92, A.P.C. Road, Kolkata-700 009; ardas66@rediffmail.com; ardchem@caluniv.ac.in; Contact: 91-9433120265

Academic qualifications:

College/ university from which the degree was obtained	Abbreviation of the degree
Serampore College, University of Calcutta	B.Sc(Honours in Chemistry)
University of Calcutta	M.Sc (Specializaton in Organic Chemistry)
UGC-CSIR (NET)	Qualified NET as JRF (CSIR Fellow, Top 5% Candidate)
Jadavpur University	Ph.D(Sc)
National Tsing Hua University, Taiwan	Post-Doctoral Fellow(May 2002 – July 2003), worked with Prof. Reuben Jih-Ru Hwu

Positions held/ holding:

Lecturer(16.11.1994-19.02.1996) in Scottish Church College, Calcutta; (20.02.1996-15.11.1999) in University of Calcutta; Senior Lecturer (16.11.1999-15.11.20030 in University of Calcutta); Reader (16.11.2003-15.11.2006) in University of Calcutta; Associate Professor (16.11.2006-27.06.2011); Professor(28.06.2011-Present)

Research interests:

- Development of new synthetic methods.
- Nano metal oxide and nano particle mediated catalysis.
- Use of green tools and green synthetic procedures.
- Metal ion as the promoter in carbon-carbon and carbon-hetero atom bond formation.
- Synthesis of novel heterocyclic molecules of medicinal interest.

Research guidance:

Number of researchers awarded Ph.D. degrees: 08

Number of researchers pursuing Ph.D.: 04

Number of Postdoctoral fellows: 02

Selected list of publications:

a) Journals:

1)**Journal of Organic Chemistry(ACS):**"Spirocyclopropanes from Intramolecular Cyclopropanation of Pyranopyrazoles and Pyranopyrimidine-diones and Lewis Acid Mediated (3+ 2) Cycloadditions of Spirocyclopropylpyrazolones", Prasun Mukherjee and **Asish R. Das**, J.Org.Chem., 2017, 82, 2794-2802.

"Diastereoselective Synthesis of Structurally and Stereochemically Diversified 2- Oxa-7-azabicyclo[4.1.0]hept-3-enyl Carboxylates and Their Potential Application toward the Synthesis of Functionalized Pyranooxazolone and Pyrrole Derivatives through Skeletal Transformations", Prasun Mukherjee and **Asish R. Das**, J.Org.Chem.,2016,81, 5513-5524 .

"Nanocrystalline and Reusable ZnO Catalyst for the Assembly of Densely Functionalized 4H-Chromenes in Aqueous Medium via One-Pot Three Component Reactions: A Greener "NOSE" Approach" ParthaPratim Ghosh and **Asish R. Das**, J. Org Chem., 2013, 78, 6170-6181.

2) Advanced Synthesis and Catalysis(Wiley): "Magnetically retrievable nano crystalline $NiFe_2O_4$ catalyzed aerobic, ligand free C-N, C-O and C-C cross-coupling reactions for the synthesis of a diversified library of heterocyclic molecules", **Asish R.**

Das, Sanjay Paul, Koyel Pradhan, Sirshendu Ghosh, S.K. De, Advanced Synthesis & Catalysis,2014, 356, 1301–1316.

3) Catalysis Science and Technology(RSC): "A new application of polymer supported, homogeneous and reusable catalyst PEG–SO3H in the synthesis of coumarin and uracil fused pyrrole derivatives", Sanjay Paul; **Asish R. Das**, Catal. Sci. Technol., 2012, 2, 1130-1135.
"Magnetically retrievable nano crystalline CuFe2O4 catalyzed multi-component reaction: A facile and efficient synthesis of functionalized dihydropyrano[2,3-c]pyrazol, pyrano[3,2-c]coumarin and 4H-chromene derivatives in aqueous media" **Asish R. Das**, Koyel Pradhan and Sanjay Paul Catal. Sci. Technol., 2014, 4, 822.

4) Green Chemistry(RSC): "Design and synthesis of benzylpyrazolyl coumarin derivatives via four component reaction in water: Investigation on the weak interactions accumulating the crystal structure of a signified compound", ParthaPratim Ghosh, Gargi Pal, Sanjay Paul, **Asish R. Das**, Green Chemistry, 2012, 14, 2691-2698.

5) RSC Advances (RSC):"Synthesis of 2,3-dihydroquinazolinones and quinazolin-4(3H)-one catalyzed by Graphene Oxide nanosheets in aqueous medium: "on-water" synthesis accompanied by carbocatalysis and selective C-C bond cleavage", NaziaKausar, Indranil Roy, Dipankar Chattopadhyay and **Asish R. Das**, RSC Advances., 2016, 6, 22320-22330.

b) Other publications:

- Please See…List of publications

Membership of Learned Societies:

1)Life member, Asiatic Society, Kolkata; 2) Life Member Indian Chemical Society, Kolkata,India; 3)Life Member Indian Association for the cultivation of Science, Jadavpur, Kolkata,India.

Patents: 05

1) "Process for preparation of Tamsulosin and its derivatives via coupling of aminopropylbenzenesulfonamide hydrochlorides with phenoxyethanol tosylates or mesylates", Jih- Ru Hwu, M. Balachary, Subhasish K. Chakraborty, **Asish R. Das**, Shwu- Chen Tsay, Kuen Wang Sheu, Chun Mei Shu, Chin kun Lu, Wei Ming Chang; Eur. Pat. Appl. (2006), EP 1734036 A1 20061220.

2) "Process for preparation of Tamsulosin and its aralkylamine derivatives", Jih- Ru Hwu, Shwu- ChenTsay, M. Balachary, Subhasish K. Chakraborty, **Asish R. Das**, Kuen Wang Sheu, Chun Mei Shu, Chin kun Lu, Wei Ming Chang; United States Patent 7282606, 2007.

3) "Preparation of benzimidazole-containing nucleosides as antiviral agents", Johan Neyts, **Asish R. Das**, Shih Ching Hung, Jih Ru Hwu, R. Singha; PCT Int. Appl. (2007), WO 2007128086 A2 20071115.

4)"Novel Viral Replication Inhibitors", Johan Neyts, **Asish R. Das**, Hung Shih Ching, Jih Ru Hwu, R. Singha; US Patent 2009/0197910 DOP 06/08/2009.

5)"Novel Viral Replication Inhibitors", Johan Neyts, **Asish R. Das**, Hung Shih Ching, Jih Ru Hwu, R. Singha; EP 2009/2032541 DOP 11/03/2009.

Invited lectures delivered:

1) Science Academies' Education Programmes
Lecture Workshop
on
"Recent Trends in Chemistry with Reference to Teaching and Research"
13th & 14th March, 2015
Organized by

Department of Chemistry, Visva-Bharati Santiniketan -731235

West Bengal, India

Venue: Department of Chemistry, Visva-Bharati

Title: Nanocatalyst: Application to Organic Synthesis (14^{th} March,2015)

2) 53rd ACC(ANNUAL CONVENTION OF CHEMISTS) 2016, GITAM UNIVERSITY, VISAKHAPATNAM(DEC 27-29,2016).

ORGANISED BY: **INDIAN CHEMICAL SOCIETY**

Venue: Gitam Institute of Science, Gitam University

Title: Hypervalent Iodine Promoted Synthesis of NH-Aziridine and Cyclopropane Fused Heterocycles and Their Synthetic Applications (IL-10) (Dec29,2016)

Chairs held in International and National Conferences:

1) Acted as the Chair- Person in "International Conference on Chemistry forHuman Development(ICCHD-2018) (Date 8-10 Jan,2018, Heritage Instituteof Technology, Kolkata)of Technical Session 18(Jan9,2018) comprising thelectures(i)PL-18 by Prof. Qi-Lin Zhou, of Nankai University China(ii)IL-38by Dr. Ranjan Jana of IICB, Kolkata (iii) IL-39 by Dr. P Shanmugam ofCLRI, Chennai.

2) Acted as the Chair-Person in "National Conference on Functional Molecules(NCOFM-2019)(Date: 30th March, 2019, University of Calcutta) ofTechnical Session 3 comprising the lectures (i) IL-5 by Prof. SoumenHajra, CBMR, Lucknow (ii)Dr. Debajyoti Ghosal, JU

List of Publications:

76)Magnetically Recyclable Nano Nickel Ferrite Catalyzed One-pot Chalcogenation of Bioactive Heterocycles Under Aerobic Condition, Dwaipayan Das, Prasun Mukherjee, **and Asish R. Das**, Chem. Select,2019,*4*,1971-1978

75)Oleic acid ameliorates adrenaline induced dysfunction of rat heart mitochondria by binding with adrenaline: An isothermal titration calorimetry study,SanatanMishra[ab1]AindrilaChattopadhyay,ShamreenNaaz**,**Arnab K.Ghosh**,Asish RanjanDas,**DebasishBandyopadhyay, Life sciences, 2019, *218*, 96-111

74) An easy access towards quinazolines via an improved protocol for ynones, Subhadeep Ghosh and **Asish R. Das**, J. Indian Chem. Soc., 2018, 95, 1249-1258.

73)I_2/TBHP promoted oxidative C–N bond formation at room temperature: Divergent access of 2-substituted benzimidazoles involving ring distortion, MoumitaSaha, **Asish R.Das**, Tetrahedron Lett. ,2018, *59*, 2520-2525

72) Synthesis of novel tricyclic pyrazolo(1, 4)oxathiinopyrazines and Evaluation of Their Competency Towards the Inhibition of Lactate Dehydrogenase Activity-Inhibition of LDH Activity, Prasun Mukherjee, **Asish R. Das**, Raghwendra Mishra, ShovonlalBhowmick, AchintyaSaha, Drug Res, 2018,*68*:653-660

71) "$Cu(OAc)_2$ catalyzed N-benzylation of 3-aminocoumarins with primary aromatic amines and alcohols: A new efficient route to access direct C-N bond via monobenzylation of 3-aminocoumarin derivatives" ,NaziaKausar and **Asish R Das** ,J.Indian Chem Soc.,2018,*95*,81-89

70) Access of Diverse 2-Pyrrolidinone, 3,4,5-Substituted Furanone and 2-Oxo-dihydropyrroles Applying Graphene Oxide Nanosheet: Unraveling of Solvent Selectivity

MoumitaSaha, **Asish R. Das**, Chem Select,2017,*2*,10249-10260

69) "One-flask synthesis of pyrazolone thioethers involving catalyzed and uncatalyzed thioetherification pathways of pyrazolones", Prasun Mukherjee and **Asish R. Das**, Org. Biomol. Chem, 2017,*15*,7267-7271

68)"CuI-$Zn(OAc)_2$ catalyzed $C(sp^2)$-H activation for the synthesis of pyridocoumarins through an uncommon Cu(I)-Cu(III) switching mechanism: A fast, solvent-free, combo-catalytic, ball milling approach" ,NaziaKausar and **Asish R Das** , Tetrahedron Lett. ,2017, *58*, 2602-2617

67) **"**A facile and versatile protocol for the one-pot $PhI(OAc)_2$ mediated divergent synthesis of quinazolines from 2-aminobenzylamine" , MoumitaSaha, Prasun Mukherjee and **Asish R. Das**, Tetrahedron Lett. ,2017, *58* ,2044-2049

66) "Spirocyclopropanes from Intramolecular Cyclopropanation of Pyranopyrazoles and Pyranopyrimidine-diones and Lewis Acid Mediated (3 + 2) Cycloadditions of Spirocyclopropylpyrazolones", Prasun Mukherjee and **Asish R. Das**, J.Org.Chem., 2017, *82*, 2794-2802

65) "A green synthetic approach toward the synthesis of structurally diverse spirooxindole derivative libraries under catalyst-free conditions", NaziaKausar, AbdullaAlMasum,Md.MaidulIslam and **AsishR.Das**,Mol Divers, 2017,*21*,325-337

64) "Practical application of $PhI(OAc)_2/I_2$ combination to synthesize benzimidazoles from 2-aminobenzylamine through ring distortion strategy" , MoumitaSaha, Prasun Mukherjee and **Asish R. Das**, Tetrahedron Lett. ,2017, *58* ,1046–1049

63) *"*A practical carbocatalysis by Graphene Oxide nanosheets in aqueous medium towards the synthesis of diversified dibenzo[1,4]diazepine scaffold" , NaziaKausar , Prasun Mukherjee and **Asish R Das**, RSC Advances., 2016, *6*, 88904-88910.

62)"Facile and eco-friendly synthesis of chromeno[4,3-*b*]pyrrol-4(1*H*)-one derivatives applying magnetically recoverable nano crystalline $CuFe_2O_4$ involving a domino three-component reaction in aqueous media",MoumitaSaha, Koyel Pradhan and **Asish R. Das**, RSC Advances., 2016, *6*, 55033-55038

61) "Diastereoselective Synthesis of Structurally and Stereochemically Diversified 2- Oxa-7-azabicyclo[4.1.0]hept-3-enyl Carboxylates and Their Potential Application toward the Synthesis of Functionalized Pyranooxazolone and Pyrrole Derivatives through Skeletal Transformations", Prasun Mukherjee and **Asish R. Das**, J.Org.Chem.,2016,*81*,5513-5524

60)"Synthesis of 2,3-dihydroquinazolinones and quinazolin-4(3*H*)-one catalyzed by Graphene Oxide nanosheets in aqueous medium: "on-water" synthesis accompanied by carbocatalysis and selective C-C bond cleavage", NaziaKausar, Indranil Roy, Dipankar Chattopadhyay and **Asish R. Das**, RSC Advances., 2016, *6*, 22320-22330

59) "Ethyl Lactate as a Green Solvent: A Promising Bio-Compatible Media for Organic Synthesis" ,Sanjay Paul,Koyel Pradhanand**Asish R Das**, Current green Chemistry,

2016,*3*,111-118

58) "Facile synthesis of functionalized 6-cyano-2-oxa-7-azabicyclo[4.1.0]hept-3-en-1-yl acetates: a catalyst free approach to access the pyran fused 2-acetoxy-NH-aziridines", Prasun Mukherjee and **Asish R. Das**, RSC Advances., 2016, *6*, 132-139

57) "Expeditious synthesis of functionalized tricyclic 4-spiro pyrano[2,3-c]pyrazoles in aqueous medium using dodecylbenzenesulphonic acid as a Brønsted acid–surfactant-combined catalyst" , Prasun Mukherjee, Sanjay Paul and **Asish R. Das**, *New J.Chem.*, 2015,*39*,9480-9486

56) "Graphene oxide nanosheets: a highly efficient and reusable carbocatalyst catalyzes the Michael-cyclization reactions of 4-hydroxycoumarins, 4-hydroxypyrone and 4-hydroxy-1-methylquinolinone with chalcone derivatives in aqueous media", NaziaKausar, ParthaPratimGhosh, Gargi Pal and **Asish R. Das**,RSC Advances.**,** 2015, 5**,** 60199-60207

55) "Synthesis of indeno and acenaphtho cores containing dihydroxy indolone, pyrrole, coumarin and uracil fused heterocyclic motifs under sustainable conditions exploring the

catalytic roleof the SnO_2 quantum dot",Koyel Pradhan, Sanjay Paul and **Asish R. Das**, RSC Advances,2015,5,12062-12070

54)"In situ synthesis of reduced graphene oxide/cuprous oxide nanocomposite: A reusable catalyst" ,Indranil Roy, Amartya Bhattacharyya, Gunjan Sarkar, Nayan Ranjan Saha, Dipak Rana,ParthaPratim Ghosh,MainakPalit, **Asish R Das**, Dipankar Chattopadhyay, RSC Advances, 2014,*4*, 52044

53) "Uncapped SnO_2 quantum dot catalyzed cascade assembling of four components: A rapid and green approach to the pyrano[2,3-c]pyrazole and spiro-2-oxindole derivatives" **Asish R. Das**, Sanjay Paul, Koyel Pradhan, Sirshendu Ghosh, S.K. De *Tetrahedron*, 2014, 70, 6088-6099.

52) "A facile and efficient synthesis of functionalized 4-oxo-2-(phenylimino)thiazolidin-5-ylideneacetate derivatives via $CuFe_2O_4$ magnetic nanoparticles catalyzed regioselective pathway" **Asish R. Das**, Gargi Pal, Sanjay Paul, *New J. Chem.*, 2014, 38, 2787-2791.

51) "Synthesis of a diversified combinatorial library of 1H-pyrazolo[1,2-*b*]phthalazine-5,10-dione derivatives applying sustainable carbon based solid acid catalyst involving domino four-component reaction", **Asish R. Das**, Koyel Pradhan, Sanjay Paul, *MonatsheftefürChemie - Chemical Monthly*, 2014, 145, 1343-1352.

50) "Magnetically retrievable nano crystalline $NiFe_2O_4$ catalyzed aerobic, ligand free C-N, C-O and C-C cross-coupling reactions for the synthesis of a diversified library of heterocyclic molecules", **Asish R. Das**, Sanjay Paul, Koyel Pradhan, Sirshendu Ghosh, S.K. De, *Advanced Synthesis & Catalysis*,2014, 356, 1301–1316.

49) "Magnetically retrievable nano crystalline $CuFe_2O_4$ catalyzed multi-component reaction: A facile and efficient synthesis of functionalized dihydropyrano[2,3-c]pyrazol, pyrano[3,2-c]coumarin and 4H-chromene derivatives in aqueous media" **Asish R. Das**, Koyel Pradhan and Sanjay Paul,Catal. Sci. Technol., 2014, 4, 822

48) "PhIO promoted synthesis of nitrile imines and nitrile oxides within micellar core in aqueous media: A regiocontrolled approach to synthesize densely functionalized pyrazole and isoxazoline derivatives" **Asish R. Das**, Gargi Pal, Sanjay Paul and ParthaPratim Ghosh, RSC Adv., 2014, ***4,*** 8300-8307

47) "An efficient and reusable non-ionic surfactant-catalysed synthesis of bis-coumarin derivatives in aqueous media" ParthaPratim Ghosh, Prasun Mukherjee, Rajesh Mondal and **Asish R. Das**,*J. Indian Chemical Society*, 2013, ***90***, 1781-1787.

46) Synthesis of a SO_3H-bearing carbonaceous solid catalyst, PEG–SAC: application for the easy access to a diversified library ofpyranderivatives, Sanjay Paul,Sirshendu Ghosh,Pranabes Bhattacharyya and**Asish R. Das**, *RSC Advances,* 2013, **3**, 14254-14262.

45) "Nanocrystalline and Reusable ZnO Catalyst for the Assembly of Densely Functionalized 4H-Chromenes in Aqueous Medium via One-Pot Three Component Reactions: A Greener "NOSE" Approach" ParthaPratim Ghosh and **Asish R. Das**, *J. Org Chem.,* 2013, **78,**6170-6181.

44) "Three-component synthesis of a polysubstituted pyrrole core containing heterocyclic scaffolds over magnetically separable nanocrystalline copper ferrite" Sanjay Paul, Gargi Pal and **Asish R. Das**, *RSC Advances*, 2013, **3**, 8637-8644

43) "Triton-X-100 catalyzed synthesis of 1,4-dihydropyridines and their aromatization to pyridines and a new one pot synthesis of pyridines using visible light in aqueous media" ParthaPratim Ghosh, Prasun Mukherjee and **Asish R. Das**, *RSC Advances,* 2013, **3**, 8220-8226.

42) "$Fe(DS)_3$, an efficient Lewis acid-surfactant-combined catalyst (LASC) for the one pot synthesis of chromeno[4,3-b]chromene derivatives by assembling the basic building blocks", Koyel Pradhan, Sanjay Paul, **Asish R. Das** , *Tetrahedron Lett*. 2013**, *54,***3105-3110

41) "Alum-Catalyzed Synthesis of 3-(1*H*-Pyrrol-2-yl)-2*H*-chromen-2-ones: A Water-PEG 400 Binary Solvent Mediated, One-Pot, Three-Component Protocol", Gargi Pal, Sanjay Paul, **Asish R. Das**, *Synthesis* ,2013,***45***,1191-1200

40) "Facile synthesis of pyridopyrimidine and coumarin fused pyridine libraries over a Lewis base-surfactant-combined catalyst TEOA in aqueous medium", Pranabes Bhattacharyya, Sanjay Paul, **Asish R. Das**, *RSC Advances*. 2013, ***3,*** 3203-3208

39) "Dual role of the polymer supported catalyst PEG-OSO3H in aqueous reaction medium: Synthesis of highly substituted structurally diversified coumarin and uracil fused spirooxindoles", Sanjay Paul, **Asish R. Das**.*Tetrahedron Lett*. 2013**, *54,*** 1149-1154.

38) "An expedient synthesis of biologically potent Aryloxycoumarins and (Aryloxyimino)ethylcoumarins via Copper(II)-promoted Chan-Lam coupling reaction", Arunima

Medda, Gargi Pal, Raghunath Singha, Tabassum Hossain, AchintaSaha, **Asish R. Das**, *Synth. Commun*. 2013, ***43,***169-181

37)**"**Light induced synthesis of symmetrical and unsymmetrical dihydropyridines in ethyl lactate-water under tunable condition", Partha Pratim Ghosh, Sanjay Paul, **Asish R. Das***Tetrahedron Lett*. 2013, ***54***,138-142

36) "Design and synthesis of coumarinyl 1,4-benzodioxanes as potential anti-oxidant",**Asish R Das**, Gargi Pal, Pranabes Bhattacharyya, Arnab K.Ghosh, Debasri Mukherjee, Debasish Bandyopadhyay***,*** *Tetrahedron Lett*. 2012, ***53***,7060-7066

35) "Synthesis of 3,4-dihydropyridin-2-one derivatives in convergent mode applying bio catalyst Vitamin B1 and polymer supported catalyst PEG-SO3H from two different sets of building blocks", Koyel Pradhan, Pranabes Bhattacharyya, Sanjay Paul, **Asish R. Das**, *Tetrahedron Lett*. 2012, ***53,*** 5840-5844

34) "Design and synthesis of benzylpyrazolyl coumarin derivatives via four componentreaction in water: Investigation on the weak interactions accumulating the crystal structure of a signified compound", ParthaPratim Ghosh, Gargi Pal, Sanjay Paul, **Asish R. Das**, *Green Chemistry*, 2012, ***14***, 2691-2698

33) "Nano Crystalline ZnOcatalysed one- pot multicomponent reaction for an easy access of fully decorated 4*H*-pyran scaffolds and its rearrangement to 2-pyridone nucleus in aqueous media**",** Pranabes Bhattacharyya, Koyel Pradhan, Sanjay Paul, **Asish R. Das**, *Tetrahedron Lett*. 2012,***53,*** 4687-4691

32) "A new application of polymer supported, homogeneous and reusable catalyst PEG–SO_3H in the synthesis of coumarin and uracil fused pyrrole derivatives", Sanjay Paul; **Asish R. Das**, *Catal. Sci. Technol*., 2012, ***2***, 1130-1135

31) "Nano crystalline ZnO: a competent and reusable catalyst for one pot synthesis of novel benzylamino coumarin derivatives in aqueous media", ParthaPratim Ghosh; **Asish R. Das**, *Tetrahedron Lett*., 2012, ***53***,3140-3143

30) "An efficient green protocol for the synthesis of coumarin fused highly decorated indenodihydropyridyl and dihydropyridyl derivatives", Sanjay Paul; **Asish R. Das**, *Tetrahedron Lett*., 2012,***53***, 2206-2210

29) "A new strategy for the one pot synthesis of (aryloxyimino)ethylcoumarins promoted by $CuCl_2$", Gargi Pal; Pranabes Bhattacharyya; Arunima Medda; **Asish R.Das**, *Journal of Chemical Research*, 2012,***36***, 5-8.

28) "A novel coumarinyl Scaffold as metal ion sensor towards spectrophotometric detection of Cu^{+2}, Ni^{+2} and Zn^{+2} ions", Pranabes Bhattacharyya, Arunima Medda, Dinesh C. Gorain, Bijon Kr. Pal, Nikhil Guchhait, **Asish R. Das**, *J. Indian Chemical Society*, 2012,***89***,623-629

27) "One-pot synthesis of dihydropyrano[2,3-c]chromenes via a three component coupling of aromatic aldehydes, malononitrile, and 3-hydroxycoumarin catalyzed by nano-structured ZnO in water: a green protocol", Sanjay Paul; Pranabes Bhattacharyya; **Asish R.Das**, *Tetrahedron Lett.*, 2011, ***52***, 4636-4641

26) "Silica gel-mediated microwave-assisted efficient synthesis of highly substituted imidazoles and exploration of naked eye/colorimetric sensor for anions", Pranabes Bhattacharyya; Arunima Medda; AnuvaSamanta; Nikhil Guchhait; **Asish R.Das**, *J. Indian Chemical Society*, 2011,***88***, 983-993.

25) "Synthesis of biologically potent new 3-(heteroaryl)aminocoumarin derivatives via Buchwald-Hartwig C-N coupling", **Asish R. Das**; Arunima Medda; Raghunath Singha, *Tetrahedron Lett.*, 2010, ***51***, 1099-1102

24) "Synthesis and application of 4-methoxy benzeneazo-2'-naphthol and 2-nitro benzeneazo-2'-naphthol on wood, silk and nylon fabrics" A.Chakraborty, P.K. Saha, C.Dutta, **Asish.R.Das**, M.B.Saha, *Colourage*, 2009, **LVI** (7), 82-88

23) "A highly active catalyst supported molecular sieves-$NaHCO_3$ mixture for the selective and advantageous N-monoalkylation of amines", **Asish R Das**; Arunima Medda; Raghunath Singha; Nikhil Guchhait, *J. Indian Chemical Society*, 2009, **86**, 841-848.

22) “Structure-activity relationship of new anti-hepatitis C virus agents: heterobicycle-coumarin conjugates”, Johan Neyts; Erik De Clercq; Raghunath Singha; Yung Hsiung Chang; **Asish R Das;**Subhasish K Chakraborty; Shih Ching Hong; Shwu-Chen Tsay; Ming-Hua Hsu; Jih Ru Hwu, *J. Med. Chem.*, 2009, **52**, 1486-1490.

21) “Silicon-induced ene-type reaction in the thermal conversion of enolates to beta-silyl enones with molecular dioxygen”, Jih Ru Hwu; Chien Hsien Chen; Chuan-I Hsu; **Asish R Das**; Yen Cheng Li; Lung Ching Lin ;*Organic letters*, 2008, **10**, 1913-6

20) “Synthesis of novel 3-substituted coumarin carboxamides with biological interest and their spectral studies”, **Asish R. Das**, A.Medda, R.Singha, A.Samanta, N.Gucchait ; *J. Indian Chemical Society*, 2008, **85**, 1124-1129.

19) “Synthesis of new Benzimidazole-coumarin conjugates as anti-hepatitis C virus agents”, Jih Ru Hwu, R.Singha, S.C.Hong, Y.H.Chang, **Asish R. Das**, Inge Vliegen, Erik de Clercq, Johan Neyts; *Antiviral Research*, 2008, **77**, 157-162

18) “Novel Viral Replication Inhibitors”, Johan Neyts, **Asish R. Das**, Hung Shih Ching, Jih Ru Hwu, R. Singha; US Patent 2009/0197910 DOP 06/08/2009 ; EP 2009/2032541 DOP 11/03/2009.

17) “Preparation of benzimidazole-containing nucleosides as antiviral agents”, Johan Neyts, **Asish R. Das**, Shih Ching Hung, Jih Ru Hwu, R. Singha; PCT Int. Appl. (2007), WO 2007128086 A2 20071115.

16) “Process for preparation of Tamsulosin and its aralkylamine derivatives”, Jih- Ru Hwu, Shwu- Chen Tsay, M. Balachary, Subhasish K. Chakraborty, **Asish R. Das**, Kuen Wang Sheu, Chun Mei Shu, Chin kun Lu, Wei Ming Chang; United States Patent 7282606, 2007.

15) “Process for preparation of Tamsulosin and its derivatives via coupling of aminopropylbenzenesulfonamide hydrochlorides with phenoxyethanol tosylates or mesylates”, Jih- Ru Hwu, M. Balachary, Subhasish K. Chakraborty, **Asish R. Das**, Shwu- Chen Tsay, Kuen Wang Sheu, Chun Mei Shu, Chin kun Lu, Wei Ming Chang; Eur. Pat. Appl. (2006), EP 1734036 A1 20061220.

14) "1,2-Eliminations in a novel reductive coupling of nitroarenes to give azoxy arenes by sodium bis(trimethylsilyl)amide", Jih- Ru Hwu; **Asish R Das**; Chia Wei Yang; Jiann-Jyh Huang; Ming-Hua Hsu ,*Organic Letters,* 2005, **7**, 3211-3214.

13) "Zinc mediated allylation of aldehydes and ketones using allylbromides and commercial zinc dust. The issue of regio- and stereoselectivity", AdinathMajee, **Asish R.Das** and Brindaban C. Ranu, *Indian Journal of Chemistry,* 1998, **37B**, 731-736.

12) "A convenient synthesis of β, γ- unsaturated ketones through Zinc mediated allylation of acid chlorides", B.C.Ranu, A.Majee and **Asish R.Das**, *Tetrahedron Lett.*, 1996, **37**, 1109.

11) "Facile and efficient synthesis of homoallylic alcohols using Allyl Bromide and commercial Zinc dust", B.C.Ranu, A.Majee and **Asish R.Das**, *Tetrahedron Lett.*, 1995, **36**, 4885.

10) "Surface-mediated solid phase reaction. Part 7[1]. A simple and convenient procedure for the Methoxymethylation of alcohols with Methoxymethyl Chloride on the surface of Alumina", B.C.Ranu, A.Majee and **Asish R.Das**, *Synth. Commun.*, 1995,***25***, 363.

9) "Surface-mediated reactions- A powerful technique in organic synthesis use of Alumina and Silica gel as active surface for useful synthetic transformations", B.C.Ranu, S.Bhar, R.Chakraborty, **Asish R.Das**, M.Saha, A.K.Sarkar, R.Chakraborti and D.C.Sarkar, *J. Ind. Inst. Sci.*, 1994, **74**, 15.

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