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APPENDIX-A

LIST OF RESEARCH PUBLICATION(S)

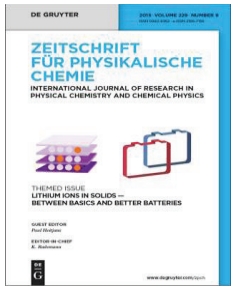
[1] NMR, Surface tension and Conductance Study to Investigate Host–guest Inclusion Complexes of Three Sequential Ionic Liquids with β-cyclodextrin in Aqueous Media

Chemical Physics Letters

658 (2016) 43–50.

(Included in the Thesis)

[2] Investigation Probing Inclusion Complex Formation of Amantadine Hydrochloride with 18-Crown-6 in Methanol by Physicochemical Approach



Zeitschrift für Physikalische Chemie

231 (2016) 1111-1126.

(Included in the Thesis)

[3] Investigation on Solvation Behavior of an Ionic Liquid (1-butyl-3-methylimidazolium chloride) with the Manifestation of Ion Association Prevailing in Different Pure Solvent Systems

Indian Journal of Advances in Chemical Science

5 (2017) 1-16.

(Included in the Thesis)

[4] Interactions of an Antifungal Sulfa Drug with Diverse Macrocyclic Polyethers Explaining Mechanism, Performance and Physiognomies Leading to Formation of Stable Complexes

Communicated

(Included in the Thesis)

[5] Subsistence of Host-Guest Inclusion Complexes of Metoclopramide Hydrochloride with α- and β-Cyclodextrin Molecules Probed by Physicochemical Investigation

Communicated

(Included in the Thesis)

[6] Hollow Circular Compound-Based Inclusion Complexes of an Ionic Liquid

RSC Advances

6 (2016) 76381-76389.

(Included in the Thesis)

[7] Self Assembly Inclusion of Ionic Liquid into Hollow Cylinder Oligosaccharides

Journal of Molecular Liquids

214 (2016), 264-269.

[8] Study on Diverse Interactions of Vitamin Molecules Insight into H_2O + [Epy]BF_4 Systems by Physicochemical Contrivance

Indian Journal of Advances in Chemical Science

3 (2015) 204-218.

[9] Exploration of Inclusion Complexes of Neurotransmitters with β-Cyclodextrin by Physicochemical Techniques

Chemical Physics Letters

655-656 (2016), 43-50.

[10] Host–guest Inclusion Complexes of RNA Nucleosides inside aqueous Cyclodextrins Explored by Physicochemical and Spectroscopic Methods

RSC Advances

6 (2016) 8881-8891.

APPENDIX-B

LIST OF SEMINARS/ SYMPOSIUMS/ CONFERENCES ATTENDED

1. ***National Seminar on Frontiers in Chemistry – 2014*** *Sponsored by University Grants Commission (SAP-DRS-III), New Delhi, organized by Department of Chemistry, University of North Bengal on March 11th & 12th , 2014.*

2. ***Science Academies' Lecture Workshop on "Spectroscopy of Emerging Materials"*** *organised by the Department of Chemistry, University of North Bengal on November 26th & 27th , 2014.*

3. ***National Seminar on Frontiers in Chemistry - 2015*** *Funded by University Grants Commission and SAP (DRS-III) New Delhi, organized by the Department of Chemistry, University of North Bengal on February 17th & 18th , 2015.*

4. ***22nd West Bengal State Science & Technology Congress-2015*** *Organized by Department of Science and Technology, Govt. of West Bengal, West Bengal State Council of Science and Technology and University of North Bengal, Raja Rammohanpur, Darjeeling-734013 on February 28th & March 1st , 2015.*

5. ***Recent Trends on Chemistry and Biology Interface-2015*** *Organized by Chemical Research Society of India, NBU-Local Chapter, Department of Chemistry, University of North Bengal (Darjeeling) on August 28, 2015.*

6. ***19th CRSI National Symposium in Chemistry-2016*** *Organized by Department of Chemistry, University of North Bengal, Raja Rammohanpur, Darjeeling-734013 on July 14th to 16th , 2016.*

7. ***20th CRSI National Symposium in Chemistry-2017*** *Organized by Department of Chemistry, Gauhati University, Guwahati on February 3rd to 5th, 2017.*

8. ***Current Trends in University- Industries Linkages-2017*** *Funded by University Grants Commission and Organized by Department of Chemistry, University of North Bengal, Darjeeling-734013, W.B, India on 24th March,* ***2017****.*

APPENDIX: C

LIST OF ABBREVIATION

ACN	Acetonitrile
ADH	Amantadine Hydrochloride
[bmim][Cl]	1-butyl-3-methylimidazolium Chloride
CMC	Critical Micellar Concentration
CH_3OH	Methanol
CD	Cyclodextrin
α-CD	α-cyclodextrin
β-CD	β-cyclodextrin
CEs	Crown Ethers
18C6	18-crown-6
DB18C6	Dibenzo-18-crown-6
DC18C6	Dicyclohexyl-18-crown-6
^0C	Degree Celcius
DCM	Dichloromethane
FTIR	Fourier Transform Infra-red Spectroscopy
ILs	Ionic liquids
M	Molarity
mL	Milli Litre
mM	Milli Molar
mPa	Milli Pascal
MP	Metoclopramide hydrochloride
^1H-NMR	Proton-Nuclear Magnetic Resonance
RI	Refractive Index
Str.	Stretching
SA	Sulfanilamide
THF	Tetrahydrofuran
UV	Ultra Violet

LIST OF SYMBOL

ρ	Density
ϕ_V	Apparent molar volume
ϕ_V^0	Limiting apparent molar volume
S_V^*	Experimental slopes
ϕ_E^0	Limiting apparent molar expansibilities
η	Viscosity of the solution
η_o	Viscosity of the solvent
$\eta_r=\eta/\eta_o$	Relative viscosity
Λ	Molar conductance
Λ_o	Limiting molar conductance
ε	Relative permittivity of the solvent
$\Lambda_o\eta$	Walden product
$\lambda_o^{\pm}$	Ionic limiting molar conductances
$\lambda_o^{\pm}\eta$	Limiting ionic Walden product
r_s	Stokes' radii
r_c	Crystallographic Radii
K_A	Association constant
R	Distance of closest approach
$a=(r_+ + r_-)$	Sum of the crystallographic radii of the cation (r_+) and anion (r_-)
d	Average distance corresponding to the side of a cell occupied by a solvent molecule
$\lambda_o^{\pm}\eta$	The limiting ionic Walden product
E_a	Activation energy
T	Absolute temperature
K_p	Ion-pair formation constant
K_T	Triple-ion formation constant
C_P	Ion-pair concentrations
C_T	Triple-ion concentrations
α	Fraction of ion-pairs present in the solutions
α_T	Fraction of triple-ions present in the solutions.