

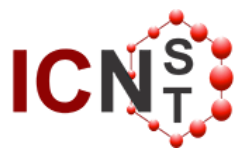


TECHNICAL PROGRAM

DAY 01 - THURSDAY, 12TH DECEMBER, 2019

INAUGURATION SESSION	Thursday, 12th December 2019 09.00 to 10.20 Gregory	
	08.00 – 09.00	Conference Registrations
	09.00 – 09.10	Lighting of the Oil Lamp and National Anthem
	09.10 – 09.20	Welcome Address by the Conference Convener Mr. Isanka P. Gamage (<i>Co-Founder & Managing Director - The International Institute of Knowledge Management (TIKM), Sri Lanka</i>)
	09.20 – 09.40	Speech by the Conference Chair Prof. K.M. Nalin de Silva (<i>Senior Professor of Chemistry and Consultant of Nanotechnology, University of Colombo, Sri Lanka</i>)
	09.40 – 10.00	Speech by the Hosting Partner Prof. Hiroshi Furuta (<i>Kochi University of Technology, Japan</i>)
	10.00 – 10.20	Conference Photograph
	10.20 – 10.40	Morning Refreshments

KEYNOTE FORUM	Thursday, 12th December 2019 10.40 to 12.00 Gregory	
	10.40 – 11.20	"Rational Design of Porphyrins for Solar Cells" Dr. Chen-Yu Yeh (<i>Professor in Chemistry, National Chung Hsing University (NCHU), Taiwan</i>)
	11.20 – 12.00	"Photon Upconverting Doped Titanium Dioxide and Lanthanide Crystals for Hydrogen Generation from Water Photo-Splitting and for Dye-Sensitized Solar Cells to Work in the Dark" Prof. R.M. Gamini Rajapakse (<i>Senior Professor in Chemistry, University of Peradeniya, Sri Lanka</i>)

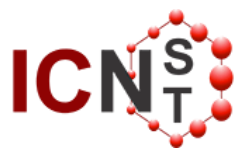


SPECIAL SESSION	Thursday, 12th December 2019 12.00 to 12.30 Gregory	
	12.00 – 12.30	"Spectro-Electrochemistry Systems and Their Application" Mr. Santosh Kulkarni (<i>Metrohm, UAE</i>)

PLENARY SPEECH	Thursday, 12th December 2019 12.30 to 13.00 Gregory	
	12.30 – 13.00	"Nano Hydroxyapatite and Their Composites: A Different Facets of Usage" Prof. Rohini M. De Silva (<i>University of Colombo, Sri Lanka</i>)
	13.00 – 14.00	Networking Lunch

TECHNICAL SESSION 01	NANOMEDICINE AND DRUG DELIVERY I	
	Thursday, 12th December 2019 14.00 to 15.20 Gregory	
	Chaired by Dr. Parameswar Hari (<i>University of Tulsa, USA</i>)	
	14.00 – 14.20	A1 Synthesis of Cobalt (II) ion doped Zinc Oxide Quantum Dots and Encapsulation of the Anticancer Drug Cisplatin for Targeted Delivery and Slow Release D.V. Athapaththu, R.M.G. Rajapakse (<i>University of Peradeniya, Sri Lanka</i>)
	14.20 – 14.40	A2 Synthesis of Acidity Triggered Cisplatin Encapsulated Slow Release Zinc Oxide Targeted Drug Delivery Nano Composite for Cancer Treatment Abayarathne H.M.I. ¹ , Dunuweera S.P. ² , Rajapakse R.M.G. ¹ (¹ <i>University of Peradeniya, Sri Lanka</i> , ² <i>Temple University, USA</i>)
	14.40 – 15.00	A3 Mosquito Larvicidal Activity of Zinc Oxide Nanoparticles on Larvae of Anopheles Vagus U.M.T.M. Gunathilaka, W.A.P.P. de Silva, R.M.G. Rajapakse (<i>University of Peradeniya, Sri Lanka</i>)

6th International Conference on Nano Science and Nanotechnology 2019 (ICNSNT 2019)



"Nanotechnology: Disruptive Technology Shaping the Future"

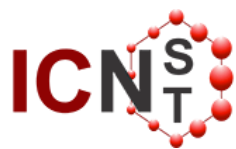
12th – 13th December 2019 | Hotel Taj Samudra, Colombo, Sri Lanka

	15.00 – 15.20	A4	Structural Elucidation of Manually Synthesized Black Mercury Sulphide (1:1) in Ayurveda Rasa Medicines T.A.N.R. Gunaratna ¹ , W.R.M. de Silva ¹ , P.K. Prajapati ² , K.M.N. de Silva ¹ (¹ University of Colombo, Sri Lanka, ² University of Delhi, India)
	15.20 – 15.40	Evening Refreshments	

TECHNICAL SESSION 02	NANOMEDICINE AND DRUG DELIVERY II		
	Thursday, 12th December 2019 15.40 to 17.00 Gregory		
	Chaired by Dr. Atanu Nandy (<i>Kulti College, India</i>)		
	15.40 – 16.00	A5	Tea Extract Formulated Gold Nano Fiber Facial Mask from PEO Gelatin Polymer Blend D.C. Manatunga, K.M.N de Silva, W.R.M. de Silva (<i>University of Colombo, Sri Lanka</i>)
	16.00 – 16.20	A6	Comparative Study of the Adsorption of Lead (II) and Fluoride Ions onto Hydroxyapatite, Hydroxyapatite – Ceria and Lanthanum Impregnated Hydroxyapatite – Ceria A.K.D.V.K. Wimalasiri ¹ , M. Shanika Fernando ¹ , S.P. Ratnayake ² , W.R.M. de Silva ¹ , K.M.N. de Silva ^{1,2} , D.P. Dissanayake (¹ University of Colombo, Sri Lanka, ² University College London, UK)
	16.20 – 16.40	A7	The Design of Electrospun Fiber Mats Embedded with Drug Loaded Halloysites for the Treatment of Chronic Wounds V.U. Godakanda ^{1,2} , W.S.D. Fernando ¹ , K.M. Nalin de Silva ¹ , W. Rohini M. de Silva ¹ , Gareth R. Williams ² (¹ University of Colombo, Sri Lanka, ² University College London, UK)
16.40 – 17.00	A8	Microencapsulation of Peppermint Oil to Develop a Smart Textile with Antimicrobial Property H.S.K. Jayawardena ¹ , K.M. Nalin de Silva ¹ , W. Rohini M. de Silva ¹ , Gareth R. Williams ² (¹ University of Colombo, Sri Lanka, ² University College London, UK)	

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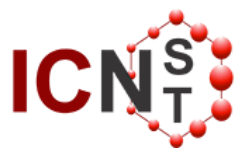


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PLENARY SPEECH	Thursday, 12th December 2019 17.00 to 17.30 Gregory	
	17.00 – 17.30	"Use of Nanomaterials as Drugs or Drug Carriers and Scaffolds for Tissue Engineering" Prof. Ena Ray Banerjee (<i>University of Calcutta, India</i>)

WORKSHOP	Thursday, 12th December 2019 17.30 to 19.00 Gregory	
	17.30 – 19.00	Workshop for Technical Textiles and Smart Textiles Moderated by Prof. K.M. Nalin de Silva (<i>Senior Professor of Chemistry and Consultant of Nanotechnology, University of Colombo, Sri Lanka</i>) and Prof. R.M. Gamini Rajapakse (<i>Senior Professor of Chemistry, University of Peradeniya, Sri Lanka</i>)



DAY 02 - FRIDAY, 13TH DECEMBER, 2019

TECHNICAL SESSION 03	NANOTECHNOLOGY IN ENVIRONMENT AND AGRICULTURE I		
	Friday, 13th December 2019 09.00 to 10.00 Gregory		
	Chaired by Dr. Atanu Nandy (<i>Kulti College, India</i>)		
	09.00 – 09.20	B1	Green Synthesized Graphene as a Novel Delivery System for Agri-Inputs Bhattacharya N., Singh B.R., Cahill D., Yang W., Greene G.W., Kochar M., Gupta M.K. (<i>The Energy and Resources Institute (TERI), India</i>)
	09.20 – 09.40	B2	Nano Mouth Condom for Controlling the Effects of Drugs and Smoking W.A.S.L. Wijerathna, W.A.A.K. Wijerathna, D.M.S.V. Dissanayaka (<i>Bhoomitech (Pvt) Ltd, Sri Lanka</i>)
09.40 – 10.00	B3	Cellulose Fibers as an Eco-Friendly Reinforcement Agent for Natural Rubber Composite J.M.A.R.B. Jayasinghe ^{1,2} , R.T. De Silva ² , K.M.N. de Silva ^{1,2} , W.R.M De Silva ¹ , (¹ <i>University of Colombo, Sri Lanka</i> , ² <i>Sri Lanka Institute of Nanotechnology, Sri Lanka</i>)	
10.00 – 10.20	Morning Refreshments		

TECHNICAL SESSION 04	ADVANCE NANO MATERIAL I		
	Friday, 13th December 2019 09.00 to 10.00 Pebbles		
	Chaired by Dr. Neha Mehra (<i>Textile Manufactures Department, VJTI, India</i>)		
	09.00 – 09.20	C1	Electrical and Optical Characterization of CuO-ZnO Solar Cells Hari P., Kaphle A. (<i>University of Tulsa, USA</i>)

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	09.20 – 09.40	C2	Anticorrosive Superhydrophobic Coating for Electronic Circuit Boards Near Coastal Areas Kotuwegedara G.G.G.W.K, De Silva W.R.M., De Silva K.M.N., Dissanayake D.P., Perera H.R., Kaumal M.N. (<i>University of Colombo, Sri Lanka</i>)
	09.40 – 10.00	C3	Development of Biodegradable Plastic/Polymer from Pineapple Peels Suganyah Baabu, Rohini M. de Silva, K.M. Nalin de Silva (<i>University of Colombo, Sri Lanka</i>)
	10.00 – 10.20	Morning Refreshments	

POSTER SESSION	Friday, 13th December 2019 10.20 to 10.40 Gregory		
	P1	Modification of ZnAl LDH Mrózek O. ¹ , Ecorchard P. ¹ , Smržová D. ¹ , Hýnek B. ² (<i>¹Institute of Inorganic Chemistry of the CAS, Czech Republic, ²The Institute of Macromolecular Chemistry of the CAS, Czech Republic</i>)	
	P2	Significance of 4- <i>Tert</i> -Butylpyridine in Ionic Liquid Electrolyte Based Dye- Sensitized Solar Cells K.D.M.S.P.K. Kumarasinghe ^{1,2} , D.G.B.C. Karunarathne ^{1,2} , P.N. Dissanayake ¹ , K. Tennakone ¹ , R.M.G. Rajapakse ² , G.R.A. Kumara (<i>¹National Institute of Fundamental Studies, Sri Lanka, ²University of Peradeniya, Sri Lanka</i>)	

KEYNOTE SPEECH	Friday, 13th December 2019 10.40 to 11.20 Gregory	
	10.40 – 11.20	"Nano-Carbon Materials for Energy and Metamaterials Applications" Prof. Hiroshi Furuta (<i>Kochi University of Technology, Japan</i>)

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TECHNICAL SESSION 05	NANOTECHNOLOGY IN ENVIRONMENT AND AGRICULTURE II	
	Friday, 13th December 2019 11.20 to 12.20 Gregory	
	Chaired by Dr. Parameswar Hari (<i>University of Tulsa, USA</i>)	
	11.20 – 11.40	B4 Tomato Growth and Yield in a Newly Designed Improved Greenhouse and Comparison of Its Performance with the Existing Greenhouses in the Arid Tropics of Central Sudan Aalim S.S.I., Elamin O.M., Elkashif M.E., Abdalla S.A. (<i>University of Gezira, Sudan</i>)
	11.40 – 12.00	B5 Synthesis of Nano Fiber Mats using Electrospinning Technology for Water Purification Applications W.M.L.B. Lahiruni, K.M. Nalin de Silva, W. Rohini M. de Silva (<i>University of Colombo, Sri Lanka</i>)
12.00 – 12.20	B6 Development of a Novel Polymer-Based Nanocomposite to Enhance the Performances of Natural Rubber Kaushalya D. Perera, K.M. Nalin de Silva, W. Rohini M. de Silva (<i>University of Colombo, Sri Lanka</i>)	
12.20 – 13.20	Networking Lunch	

TECHNICAL SESSION 06	ADVANCE NANO MATERIAL II	
	Friday, 13th December 2019 11.20 to 12.20 Pebbles	
	Chaired by Dr. Neha Mehra (<i>Textile Manufactures Department, VJTI, India</i>)	
11.20 – 11.40	C4 Analytical Study of Flat Band Networks and Optical Analogue Atanu Nandy (<i>Kulti College, India</i>)	

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11.40 – 12.00	C5	<p>Silver Vein Graphite Composite as Antibacterial Agent against <i>Staphylococcus aureus</i></p> <p>V.M.R Swarnamali¹, T.H.N.G. Amaraweera¹, M.M.S.N. Premathilake¹, H.W.M.A.C. Wijayasinghe², N.W.B. Balasooriya³ (¹<i>Uva Wellassa University of Sri Lanka, Sri Lanka</i>, ²<i>National Institute of Fundamental Studies, Sri Lanka</i>, ³<i>University of Peradeniya, Sri Lanka</i>)</p>
12.00 – 12.20	C6	<p>Microencapsulation of Lemon Oil to Develop A Smart Fabric with Antioxidant Property</p> <p>J.P.B. Gangodawila¹, K.M. Nalin de Silva², W. Rohini M. de Silva¹, Gareth R. Williams² (¹<i>University of Colombo, Sri Lanka</i>, ²<i>University College London, UK</i>)</p>
12.20 – 13.20	Networking Lunch	

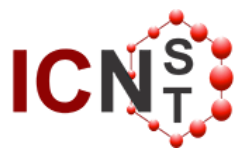
TECHNICAL SESSION 07	NANOTECHNOLOGY AND CLEAN ENERGY	
	Friday, 13th December 2019 13.20 to 15.00 Gregory	
	Chaired by Dr. Parameswar Hari (<i>University of Tulsa, USA</i>)	
	13.20 – 13.40	<p>D1</p> <p>Eco-Friendly Novel Reduced Graphene-nZVI Composite For Destruction of Nitrates in Water</p> <p>Halpegama J.U.^{1,5}, Kuss C.², Yeh C.Y.³, Herath A.C.⁴, Rajapakse R.M.G.¹, Jayarathna L.⁵, Weerasooriya R.⁵ (¹<i>University of Peradeniya, Sri Lanka</i>, ²<i>University of Manitoba, Canada</i>, ³<i>National Chung Hsing University, Taiwan</i>, ⁴<i>Rajarata University of Sri Lanka, Sri Lanka</i>, ⁵<i>National Institute of Fundamental Studies, Sri Lanka</i>)</p>
13.40 – 14.00	<p>D2</p> <p>Powder Pressed Carbon Nanotubes as Hole Conducting Material for Perovskite Solar Cells</p> <p>D.G.B.C. Karunarathne^{1,2}, P.N. Dissanayake¹, K.D.M.S.P.K. Kumarasinghe^{1,2}, G.R.A. Kumara¹, R.M.G. Rajapakse² (¹<i>National Institute of Fundamental Studies, Sri Lanka</i>, ²<i>University of Peradeniya, Sri Lanka</i>)</p>	



	14.00 – 14.20	D3	Supercapacitors Made from Cu Doped Activated Charcoal I.G.K.J. Wimalasena ¹ , K. Tennakone ² , G.R.A. Kumara ² (¹ University of Peradeniya, Sri Lanka, ² National Institute of Fundamental Studies, Sri Lanka)
	14.20 – 14.40	D4	Nanocomposites of Hydroxyapatite with Natural Clay for Water Purification M. Shanika Fernando, A.K.D.V. Wimalasiri, Rohini M. de Silva, K.M. Nalin de Silva, D.P. Dissanayake (<i>University of Colombo, Sri Lanka</i>)
	14.40 – 15.00	D5	Natural Rubber Latex Based Nanocomposites for Coating Application W.S.D. Fernando, K.M. Nalin de Silva, W. Rohini M. de Silva, J.M.A.R.B. Jayasinghe (<i>University of Colombo, Sri Lanka</i>)
	15.00 – 15.20	Evening Refreshments	

TECHNICAL SESSION 08	ADVANCE NANO MATERIAL III		
	Friday, 13th December 2019 13.20 to 15.00 Pebbles		
	Chaired by Dr. Atanu Nandy (<i>Kulti College, India</i>)		
	13.20 – 13.40	C7	Shadow Boxing with Laser: Laser Damage Resistance of Three-Dimensional Photonic Crystals Lei Pan, Hongbo Xu, Ruizhen Lv, Yao Li (<i>Harbin Institute of Technology, China</i>)
13.40 – 14.00	C8	Spin-Selective Aharonov-Casher Caging of Half-Odd Integer Spins in a Topological Quantum Network Amrita Mukherjee ¹ , Rudolf A. Roemer ² , Arunava Chakrabarti ³ (<i>¹University of Kalyani, India, ²University of Warwick, United Kingdom, ³Presidency University, India</i>)	

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	14.00 – 14.20	C9	Investigation of the Possibility of using FITC-Doped Silica Nanoparticles as a Biosensor for <i>Escherichia coli</i> Detection P.D.K.P. Ananda, G.H.C.M. Hettiarachchi, A. Tillekaratne (University of Colombo, Sri Lanka)
	14.20 – 14.40	C10	Thermally Oxidized Pd Loaded WO ₃ Nanowires for H ₂ Detection M.A.H.M. Munasinghe ^{1,2} , D. Zappa ² , N. Poli ² , N. Gunawardhana ² , E. Comini ¹ (¹ University of Brescia, Italy, ² Sri Lanka Technological Campus, Sri Lanka)
	14.40 – 15.00	C11	Synthesis and Application of Nanoemulsions for Development of Multifunctional Textile N. Mehra, P. Wankhade, V.D. Gotmare (Textile Manufactures Department, VJTI, India)
	15.00 – 15.20	Evening Refreshments	

PUBLICATION WORKSHOP	Friday, 13th December 2019 15.20 to 17.00 Gregory	
	15.20 – 17.00	Publication Workshop Moderated by Dr. Neranga Ishan Abeyasinghe (Senior Lecturer, Department of Chemistry, University of Colombo, Sri Lanka)

CONFERENCE CLOSURE	Friday, 13th December 2019 17.00 to 17.30 Gregory	
	17.00 – 17.20	Conference Concluding and Awarding Ceremony
	17.20 – 17.30	Vote of Thanks Mr. Duminda Koralagamage (Assistant General Manager - The International Institute of Knowledge Management (TIKM), Sri Lanka)

Conference Chair

.....
Prof. K.M. Nalin de Silva

(University of Colombo, Sri Lanka)

Keynote Speakers

.....
Prof. R.M. Gamini Rajapakse

(University of Peradeniya, Sri Lanka)

Dr. Chen-Yu Yeh

(National Chung Hsing University (NCHU), Taiwan)

Prof. Hiroshi Furuta

(Kochi University of Technology, Japan)

Conference Convener

.....
Mr. Isanka P. Gamage

(The International Institute of Knowledge Management, Sri Lanka)

Conference Secretary

.....
Mr. Viraj Mayadunna

(The International Institute of Knowledge Management, Sri Lanka)

Evaluation Panel

- Prof. K.M. Nalin de Silva (University of Colombo, Sri Lanka)
- Dr. Chen-Yu Yeh (National Chung Hsing University (NCHU), Taiwan)
- Prof. R.M. Gamini Rajapakse (University of Peradeniya, Sri Lanka)
- Prof. Hiroshi Furuta (Kochi University of Technology, Japan)
- Prof. Ena Ray Banerjee (University of Calcutta, India)