List of Papers Published:

252 Mixed Valent, Distorted Cobalt Ludwigite (Co$_3$BO$_5$/Co$_3$O$_2$BO$_3$) and Its Composite with Reduced Multiwalled Carbon Nanotubes (R-MWCNT) in Enhancing the Domain Edge-Sharing Oxygen as Superior Water Oxidation Electro catalysts, Dr. Sumana Kundu, Bibhudatta Malik, Dr. Deepak K. Pattanayak and Prof. Vijayamohan K. Pillai, ChemElectroChem, 5(13), 2018, 1670 – 1676

251 Co$_3$Fe$_7$/Nitrogen-doped graphene nanoribbons as bi-functional electrocatalyst for oxygen reduction and oxygen evolution, Jaison M Joy, Sivamathini Rajappa, Vijayamohan K Pillai and Subbiah Alwarappan, Nanotechnology, 2018

250 Adsorption kinetics of WS$_2$ quantum dots onto a polycrystalline gold surface, Manila Ozhukil Valappil, Mekkat Roopesh, Subbiah Alwarappan and Vijayamohan K. Pillai, Langmuir, 2018


247 Role of Specific N-Containing Active Sites in Interconnected Graphene Quantum Dots for the Enhanced Electrocatalytic Activity towards Oxygen Evolution Reaction, Sumana Kundu, Bibhudatta Malik, Deepak Kumar Pattanayak, Pitchai Ragupathy and Vijayamohan K. Pillai, ChemistrySelect, 2(2017), 9943 – 9946

246 Effect of Dimensionality and Doping in Quasi-“One-Dimensional (1-D)” Nitrogen Doped Graphene Nanoribbons on the Oxygen Reduction Reaction, Sumana Kundu, Bibhudatta Malik, Deepak Kumar Pattanayak and Vijayamohan K. Pillai, ACS Applied Materials & Interfaces, 2017


242 Unraveling the Hydrogen Evolution Reaction Active Sites in N-Functionalized Interconnected Graphene Quantum Dots, Sumana Kundu, Bibhudatta Malik, Deepak K. Pattanayak, Ragupathy Pitchai and Vijayamohan K. Pillai, ChemistrySelect,


New Understanding on Regulating the Crystallization and Morphology of the $\beta$-Polymorph of Isotactic Polypropylene Based on Carboxylate–Alumoxane Nucleating Agents, Mohan Raj Mani, Ramesh Chellaswamy, Yogesh N. Marathe and Vijayamohan K. Pillai, *Macromolecules*, 46(2016), 2197–2205


Role of the Molecular Structure of Carboxylate-Alumoxanes on the Enhanced Nucleation of Polypropylene, Mohanraj Mani,a Ramesh Chellaswamy, Yogesh N. Marathe and Vijayamohan K. Pillai, *Chemical Communications*, 51(2015), 10026-10029

Electrochemical synthesis of luminescent MoS$_2$ quantum dots, Deepesh Gopalakrishnan, Dijo Damien, Bo Li, Hemtej Gullappalli, Vijayamohan K. Pillai, Pulickel M. Ajayan and Manikoth M. Shaijumon, *Chemical Communications*, 51(2015), 6293-6296

Synthesis of N, F and S co-doped graphene quantum dots, Sumana Kundu, Ram Manohar Yadav, T. N. Narayanan, Manjusha V. Shelke, Robert Vajtai, Pulickel M.


Counter-ion Dependent, Longitudinal Unzipping of Multi-Walled Carbon Nanotubes to Highly Conductive and Transparent Graphene Nanoribbons, Dhanraj B. Shinde, Mainak Majumder and Vijayamohan K. Pillai, *Scientific Reports*, 4(2014), 4363


C@SiNW/TiO2 Core-Shell Nanoarrays with Sandwiched Carbon Passivation Layer as High Efficiency Photoelectrode for Water Splitting, Rami Reddy Devarapalli, Joyashish Deb gupta, Vijayamohan K. Pillai and Manjusha V. Shelke, *Scientific Reports*, 4(2014), 4897


In situ electrochemical organization of CdSe nanoclusters on graphene during unzipping of carbon nanotubes, Joyashish Debgupta, Dhanraj B. Shinde and Vijayamohanan K. Pillai, Chemical Communications, 48(2012), 3088 – 3090.


Competitive wetting of acetonitrile and dichloromethane in comparison to that of water on functionalized carbon nanotube surfaces, Joyashish Debgupta, Bhalchandra A. Kakade and Vijayamohanan K. Pillai, Physical Chemistry Chemical Physics, 13(2011), 14668 – 14674.

Anion exchange reaction potentials as approximate estimates of the relative thermodynamic stabilities of Mg/Al layered double hydroxides containing different anions, Belavalli E. Prasad, P. Vishnu Kamath and Vijayamohanan K. Pillai, Langmuir, 27(2011), 13539 – 13543.


Ex-situ dispersion of core–shell nanoparticles of Cu–Pt on an in-situ modified carbon surface and their enhanced electrocatalytic activities, Vishal M. Dhavale, Sreekuttan M. Unni, Husain N. Kagalwala, Vijayamohanan K. Pillai and Sreekumar Kurungot,
**Chemical Communications, 47(2011), 3951.**


**RuO2 doped SnO2 nanobipyramids on Si(111) as a field emmitter**, Ashok K Bhise, D.J. Late, N.S. Ramgir, M.A. More, I.S. Mulla, Vijayamohan K. Pillai and Dilip S. Joag, *Thin


Exfoliation induced nanoribbon formation of poly (3, 4-Ethylenedioxy thiophene) PEDOT between MoS2 layers as cathode materials for lithium batteries, A. Vadivel Murugana, Mathieu Quintin, Marie-Helene Delville, Guy Campet, Chinnakonda S. Gopinath and Vijayamohanan K. Pillai, Journal of Power Sources, 156(2006), 615–619.


Investigation of interparticle interactions of larger (4.63 nm) monolayer protected gold clusters during quantized double layer charging, Nirmalya Kumar Chaki, Balachandra Kakde, Vijayamohanan K. Pillai, Poonam Singh and C. V. Dharmadhikari, Physical Chemistry and Chemical Physics, 8(2006), 1837–1844.


Electrochemical studies of Poly (3, 4-Ethylenedioxy thiophene) PEDOT/VS2 Nanocomposite as a cathode material for rechargeable Lithium batteries, A. Vadivel Murugan, Chinnakonda S. Gopinath and Vijayamohan K. Pillai, *Electrochemistry Communications*, 7(2005), 213–218.


Quantized double layer charging of dodecanethiol protected larger Au nanoclusters: combined investigations using differential pulse voltammetry, cyclic voltammetry and impedance technique, Nirmalya Kumar Chaki, Bhalchandra Kakade and Vijayamohanan K. Pillai, Electrochemistry Communications, 6(2004), 661–665.


Freely Dispersible Au@TiO₂, Au@ZrO₂, Ag@TiO₂, and Ag@ZrO₂ Core-Shell Nanoparticles: One-Step Synthesis, Characterization, Spectroscopy, and Optical Limiting Properties, Rejjius T. Tom, A. Sreekumar Nair, Navinder Singh, M. Aslam, C.L. Nagendra, Reji Philip, K. Vijayamohanan and T. Pradeep, Langmuir, 19(2003), 3439-3445.


Electrochemical lithium insertion into a poly(3,4-ethylenedioxythiophene) PEDOT/V_2O_5 Nanocomposite, A. Vadivel Murugan, Chai-Won Kwon, Gay Campet, B.B. Kale, Trupti Maddanimath and Vijayamohan K. Pillai, *Journal of Power Sources*, 4613(2001), 1-5.


