

# List of Accepted Abstracts for RAET-2010

February 25-26, 2010

## ORAL PRESENTATION

OP1 *Electrocatalytic Reduction of Bromo compound Using Ag Nanoparticle Modified GC Electrode*

**E. Prabakaran, M. Alexander and K. Pandian\***

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OP2 *Effect of Veratraldehyde on corrosion inhibition of mild steel*

**G. Harshini and T.V. Venkatesha\***

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OP3 *Silver nanoparticles embedded phosphomolybdate-polyanilinehybrid electrode for Electrocatalytic Reduction of H<sub>2</sub>O<sub>2</sub>*

**A. Manivel, S. Anandan\***

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OP4 *Square Wave Voltammetric Detection of Paraquat at a Conducting Polymer-Carbon Nanotube Composite*

**J.Tharini and R.Saraswathi\***

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OP5 *Simultaneous voltammetric determination of dopamine, ascorbic acid and uric acid using poly (glutamic acid) modified carbon paste electrode*

**Ongera Gilbert, B.E. Kumara Swamy \*, Umesh Chandra, J.G.Manjunatha, B .S. Sherigara**

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OP6 *Synergistic inhibition behavior of benzisothiazolepiperidine and iodide ions on the mild steel in sulphuric acid medium*

**M. K .Pavithra and T. V. Venkatesha\***

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OP7 *Silicate Sol-Gel Stabilized TiO<sub>2</sub>-Au Core-Shell Nanomaterials and its Photoelectrochemical Application*

**A. Pandikumar and R. Ramaraj\***

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OP8 *Differential Pulse Polarographic Determination of Mn(II) and Zn(II) in natural water and biological samples after preconcentration of its complex with 2, 2'-{benzene-1, 2-diylbis (nitrilomethylidene)}diphenol using Amberlite XAD-2010 resin*

**\*Neelam.Y. Sreedhar, Puthalapattu. R. Prasad, S. Rajasekar Reddy, M. S. Nayak**

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OP9 *Signal amplification and selective oxidation of dopamine using lanthanum hexacyanoferrate film modified electrode*

**T. Selvaraju and R. Ramaraj**

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OP10 *Electrochemical behavior of proflavine encapsulated into the nanoporous silicate materials*

**K. Senthil Kumar and P. Natarajan\***

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OP11 *A multi-component nafion membrane containing thionine and copper particulates chemically modified electrodes and it electron-transfer behaviours*

**S. Sornambikai and A. Senthil Kumar\***

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OP12 *Corrosion inhibition of aluminium in acidic solution by naturally occurring plant Calotropis*

**Sudesh Kumar, Surendra Kumar Arora\* and S. P. Mathur\*\***

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OP13 *Studies on the inhibition effect of benzotriazole on mild steel corrosion in acid media*

A. Nithya and K. Jothivenkatachalam\*

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OP14 *Ananas comosus peel extract-a source of corrosion inhibitor for mild steel in acid medium*

N. Muthulakshmi, V.S. Priya, S. Subhashini and R. Rajalakshmi

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OP15 *Electrocatalytic reduction of CO<sub>2</sub> by zinc phthalocyanine at gold nanoelectrode ensembles*

Manas Pal and Vellaichamy Ganesan

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OP16 *Electrocatalytic detection of nicotine at copper nanoparticulate modified electrode*

R. Kannan, J. Sujee, S. VasanthKumar, K. Karunakaran, A. Ramasubbu

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OP17 *Electrocatalytic Oxidation of Ascorbic Acid using Electrodeposited Gold Nanoparticle on Polypyrrole Coated Titania Nanotube Array Electrode*

T.G. Satheesh Babu\*, T.Ramachandran

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OP18 *Corrosion Inhibition of Essential Oils on Copper in Seawater, Rainwater, SO<sub>2</sub> and H<sub>2</sub>S Environments*

N. Poongothai\* and T. Ramachandran, S.C. Murugavel, M. Natesan

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OP19 *Hydrazone containing transition metal complexes-Synthesis, electrochemical studies and structural aspects*

P. Krishnamoorthy, P. Sathyadevi, R. Ramesh, P. Thomas Muthiah and N. Dharmaraj\*

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**OP20** *Charge-transfer resistances and capacitances of TiO<sub>2</sub>, ZnO and CeO<sub>2</sub> and their photocatalytic efficiencies to detoxify cyanide*

**Karunakaran\***, **P. Gomathisankar**, **G. Manikandan**

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**OP21** *Electrochemical studies of synergistic inhibition of corrosion of carbon steel using phosphonate-Zn<sup>2+</sup>-ascorbic acid formulations*

**B. V. Appa Rao\*** and **S. Srinivasa Rao**

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**OP22** *Influence of some Bioextracts on the corrosion of mild steel in acidic media*

**P.K.Kasthuri\*** and **M.Shyamala**

**OP23** *Bimetal Core-Shell Nanoparticles Modified Electrode and its Application in Electrocatalysis*

**S. Manivannan** and **R. Ramaraj\***

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**For oral presentation: 8 min presentation; 2 min discussion (10-15 slides)**

## POSTER PRESENTATION

**PP1** *Synthesis of Silver Nanoparticle Decorated Polypyrrole Protected POM and Studies Its Electrocatalytic activity*

M. Alexander and K. Pandian\*

**PP2** *Electrocatalytic Reduction of Oxygen Using Anthraquinoline Monolayer Assembly on Au Nanoparticle Modified ITO*

S. Jagannath, S. Jancy Sophia and K. Pandian\*

**PP3** *Intramolecular Proton Transfer Effects on 2,6- diaminopyridine*

A. Antony Muthu Prabhu, S. Siva, R.K. Sankaranarayanan, N. Rajendran\*

**PP4** *Cyclic voltammetry studies of some transition metal complexes involving a heterocyclic Schiff base ligand*

D. Arish and M. Sivasankaran Nair\*

**PP5** *Generation of nanocrystalline NiO particles by a solution combustion method*

K.G. Chandrappa, T.V.Venkatesha\*, K.O. Nayana and K.Vathsala

**PP6** *Spectral and Electrochemical characterization of Cu(II) complex containing Sulfapyridine moiety*

M.A. Neelakantan, M. Esakkiammal and J. Dharmaraja

**PP7** *Dicarboxylic acids as corrosion inhibitors for aluminium in 2.0 N NaOH solution*

J.Chirsty Elziharasi\*, Prabavathi Nagarajan and M.Madhula

**PP8** *Influence of potassium nitrate in conjunction with oxine as corrosion inhibitor for aluminium in alkaline medium*

J. Morris Princey\*, Prabavathi Nagarajan and S.Malathi

**PP9** *Generation, Characterization and Corrosion behaviour of Zn-TiO<sub>2</sub> composite coating*

Punith Kumar M.K., T.V. Venkatesha\*, K.Vathsala and B.M. Praveen

**PP10** *Development of electroless Ni-Zn-P/nano-TiO<sub>2</sub> composite coatings and their properties*

S. Ranganatha and T. V .Venkatesha\*

**PP11** *Electrochemical degradation of p-aminobenzoic acid β- naphthol azo dye in alkaline solution*

P. Sarala, T.V.Venkatesha\*, N.S.Ashmitha

**PP12** *Electrochemical studies of pearl carbon composited LiCo<sub>0.2</sub>Mn<sub>1.8</sub>O<sub>4</sub> electrode material for supercapacitor applications*

Simi.V.S\* and A.Subramania#

**PP13** *Monitoring of trace metals in biological samples using electrochemical nanosensors prior to anodic stripping votammetry*

\*N.Y.Sreedhar, D.Rekha, P.R.Prasad, M.Sankar Nayak

**PP14** *Cyclic voltammetric studies on metal-organic complexes containing piperidin-4-one thiosemicarbazones*

K.Selvaraj\* & M.Sujatha<sup>a</sup>

**PP15** *Influence of aliphatic chain length on the absorption and fluorescence spectral characteristics of methyl dopa, terbutaline and orciprenaline drugs*

G.Venkatesh, S. Siva, R.K. Sankaranarayanan, A.Antony Muthu Prabhu, N.Rajendiran\*

- PP16** *Solvent H-bonding influence on the electro-oxidation of anilines*  
D. S. Bhuvaneshwari
- PP17** *Musa sapientum peel extract-as corrosion inhibitor for mild steel in acid medium*  
A. Ali Fathima Sabirneeza, M.S. Srimathi, S. Subhashini and R. Rajalakshmi
- PP18** *Study on modifications of surfaces of metals using Tafel polarization technique*  
B. Narayanasamy
- PP19** *Synthesis, characterization and electrochemical studies of schiff base complexes*  
P. Jayaseelan, S. Prasad and R. Rajavel\*
- PP20** *Natural product veteria zizanodies extract as corrosion inhibitor for mild steel in 1 N HCl*  
Prabavathi Nagarajan, D.Kavitha, R.Akila\*, and P. Gayathri\*
- PP21** *Nanocrystalline stannous oxide as inhibitor for corrosion of aluminium in hydrochloric acid*  
V. Raj and P. Sumathi
- PP22** *Inhibitive effect of Polyurethanes and their Nanocomposites on Mild Steel Corrosion in 0.5 M H<sub>2</sub>SO<sub>4</sub>*  
Sitashree Banerjee, Madan M. Singh, and Pralay Maiti
- PP23** *Effect of 2-hydroxy-2'-carboxy phenyl benzaldemine on the corrosion of aluminium in 0.1 N NaoH*  
T. Jeyaraj, A. Bhuvaneshwari, M. Venkatesan
- PP24** *Effect of 4-(4-chloro-phenylazo)-benzene-1,3-diol on the rate of corrosion of Aluminium in 1.0 N NaOH*  
C. Raja, V. Joseph, G. Sankaranpillai and L. Michaelraj

PP25 *Ion exchange voltammetry of phenothiazine dyes at polymer modified electrodes*

Pankaj Kumar Rastogi, S. Krishnamoorthi and Vellaichamy Ganesan\*

PP26 *A Kinetic Study on the Oxidation of Iron(II) Complexes by TCCA using Cyclic Voltammetry*

G. Priya, S. Mega Rajan, J. Princy Merlin\*, T. Jeyaraj

PP27 *Synthesis and Characterisation of Fe<sub>3</sub>O<sub>4</sub> nanoparticle and Ag-Doped Fe<sub>3</sub>O<sub>4</sub>*

N. Radhika, C. Uma Maheswari, I. Sharmila Lydia, J. Princy Merlin\*

PP28 *Effect of 4-hydroxy-3-methoxy-2'-carboxyphenylbenzaldemine on the corrosion of aluminium in 1.0 N NaOH*

T. Jeyaraj\*, S.Sambathkumar, S.Suthakar\*

PP29 *Electrocatalytic Oxidation of Glycine Using Poly(Ni<sup>II</sup>teta) Modified Electrode*

Uday Pratap Azad and Vellaichamy Ganesan\*

PP30 *Self-assembled monolayers of functionalized compounds on gold, glassy carbon and indium tin oxide electrodes*

N.Vasimalai and S. Abraham John\*

PP31 *Electrochemical synthesis and biosensor applications of doped polyaniline films*

V. Sridevi\*, S. Malathi, C.Sivagami

PP32 *Electromeric studies of heterocyclic compounds with essential elements*

Sugam Shivhare<sup>1</sup>, M. Dave

PP33 *Corrosion inhibition mild steel in acidic media by Solanem melongena and Solanem nigrum*

C. Anitha

**PP34** *Inhibitive effect of extract of Curcuma domestica and Azadirachta indica on corrosion of aluminium in Nitric acid*

M. Senthil Vadivu and V. Raj\*

**PP35** *Synthesis and Spectral studies on transition metal complexes of salicyaldimino- 1-propyl imidazole*

M. Kalanithi, M. Rajarajan, P. Tharmaraj

**PP36** *The Electrodeposition of Aluminium from AlCl<sub>3</sub>-TMPAC Room Temperature Ionic Liquid*

P.V. Suneesh, T.G. Satheesh Babu\*, T. Ramachandran

**PP37** *Electrochemical Determination of Ascorbic acid using polyaniline - gold composite modified Glassy Carbon Electrode*

R. Narendran<sup>a</sup>, V.Vignesh<sup>a</sup>, T.G.Satheesh Babu<sup>b</sup>\*

**PP38** *Corrosion inhibitor by methanolic extract of lantana camara and tectona grandis for corrosion of mild steel in acidic media*

H. C. Sharma, S. Kumar, V. Singh, J. Sharma and S. P. Mathur

**PP39** *Interaction of organic dyes in the presence of silver nanoparticles: Comparative study*

M. Ilanchelian\*, K. Shyamala Gowri, M.K. Swapna and V. Nisha Sekhar

**PP40** *Synthesis, characterisation and electrochemical behaviour of transition metal complexes incorporating hydrazone ligand*

P. Sathyadevi, P. Krishnamoorthy, R. Ramesh<sup>a</sup>, P. Thomas Muthiah<sup>a</sup> and

N. Dharmaraj\*

**PP41** *The synergistic effect of sodium potassium tartarate-Zn<sup>2+</sup> system in controlling corrosion of carbon steel in ground water*

N. Muthumani\*, D. Sarala Thempavani

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Poster Size should be 60 cm (width) x 90 cm (height)

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**RAET-2010 Programme (Tentative)**

**Friday 25, Thursday**

9.00 am	Registration
10.30 am	Inauguration
11.30 am	Tea Break
11.45-12.30 pm	Invited Lecture-I  <b>Dr.V Yegnaraman</b>  Acting Director & Head  Electrodics and Electrocatalysis Division  Central Electrochemical Research Institute  Karaikudi.
12.30-1.00 pm	Oral Presentations (OP1-OP3)
1.00-2.00 pm	Lunch Break

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2.00-2.45 pm	Invited Lecture-II <b>Dr. R Ramaraj</b> Director Centre for Photoelectrochemistry School of Chemistry Madurai Kamaraj University, Madurai.
2.45-3.30 pm	Invited Lecture-III <b>Dr. K Natarajan</b> School of Chemistry Bharathiar University Coimbatore
3.30-3.45 pm	Tea Break
3.45-4.15 pm	Technical Session <b>Dr. K Ramesh</b> General Manager Sinsil International, Baroda
4.15-5.45 pm	Oral Presentations-II (OP4-OP12)
7.30 pm	Dinner

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**February 26, Friday**

9.30-10.15 am	Invited Lecture-III <b>Dr. BV Appa Rao</b> Department of Chemistry National Institute of Technology Warangal, Andrapradesh
10.15-11.00 am	Invited Lecture-IV <b>Dr. S Sampath</b> Department of Inorganic and Physical Chemistry Indian Institute of Science Bangalore
11.00-11.15 am	Tea Break
11.15-12.00 pm	Invited Lecture-V <b>Dr. K Vijayamohan</b> National Chemical Laboratory Pune

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12.00-1.10 pm	Oral Presentations-III (OP13-OP19)
1.10-2.00 pm	Lunch Break
2.00-2.40 pm	Oral Presentations-IV (OP20-OP23)
2.40-3.40 pm	Poster Presentation (PP1-PP45)
3.40-3.55 pm	Tea Break
3.55 pm	Valediction <b>Dr. P Natarajan</b> Former Director Central Salt and Marine Research Institute, Bhavnagar, Gujarat Centre for Ultrafast Processes University of Madras, Chennai