



Department of Natural Products Chemistry School of Chemistry

Madurai Kamaraj University

(University with potential for excellence)

Re-accredited by NAAC with A⁺⁺ Grade in the 4th Cycle
Madurai-625 021, Tamil Nadu, India



Organizes Three-Day International E-Conference On

"Electrochemical Techniques and their Applications in the Development of Sensors" (ETADS-2022)

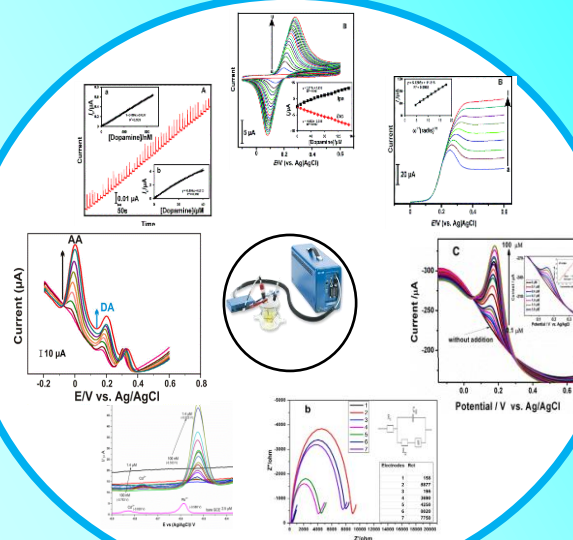
20-22nd, January-2022

(Under the financial Support of RUSA Phase-II Programme, MKU, Madurai)

About Madurai Kamaraj University

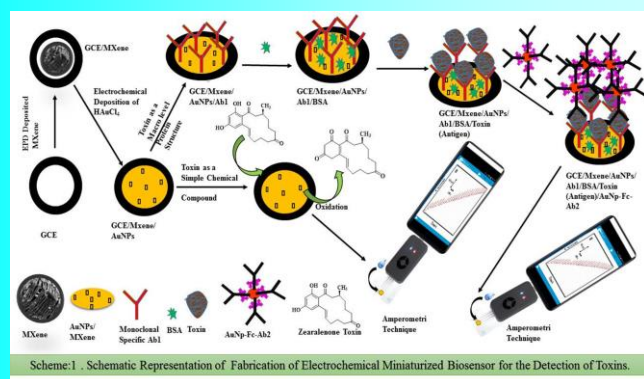
Madurai Kamaraj University – “University with Potential for Excellence”
Madurai Kamaraj University was established in the year 1966 as a State University, which attained the status of University with Potential for Excellence for ‘Teaching, Research and Outreach’ in 2007. The University is governed by Acts, Statutes, Ordinances and Regulations. Our University has attained CATEGORY – I amongst the Universities in all over India on 16th March, 2021 in the NAAC 4th Cycle. “SWACHHTA” Ranking of Higher Educational Institutions in the Country, the HRD Ministry awarded Second Rank to the University among the category of Government Institutions on 14th September 2017. The University is in its untiring eternal journey in search of knowledge, creation and dissemination that resulted in recognitions by its faculty members which include 22 Padmashri awards, 4 Shanti Swarup Bhatnagar awards, 2 Parliament awards, 8 FNAs, 8 FNAScs, 11 FAScs, 2 TWAS, a Senior Spallanzani Fellow and 16 Tamil Nadu State Scientist Awards. Fourteen faculty of the University have been elevated as Vice-Chancellors including the present Vice-Chancellor. Several Alumni are IAS/IPS/IRS officers. The University has 20 Schools comprising 77 Departments offers 44 Post Graduate, 40 M.Phil., 57 Ph.D programmes and 17 diploma/ P.G. diploma/ certificate courses, which has produced about one crore graduates in the past 50 years. Currently, a total of 4650 UG/PG students and research scholars are on the roll. Since 1999, all the courses offered in the University following Choice Based Credit System (CBCS).

Twelve schools are recognized under UGC with Special Assistance Programme (SAP) such as CAS, DSA and DRS at various phases. Madurai Kamaraj University has obtained the A++ grade with CGPA of 3.54 out of 4 in NAAC 4th cycle assessment. Our University is aiming towards its goal to earn the status of ‘University of Eminence’ in the near future. Madurai Kamaraj University has secured 63rd rank in the NIRF Rankings 2021 in the University Category. In the overall category, among 3127 Indian Universities and Institutions, Madurai Kamaraj University has secured 83rd position.



About School of Chemistry

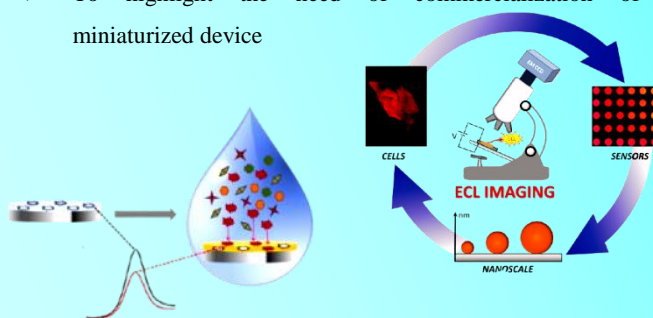
The nucleus of the present School of Chemistry was formed when the University of Madras established an extension centre at Madurai in 1958. Having a humble beginning as the Department of Chemistry in 1966 of the then established Madurai University; it has later bloomed into a full-fledged School. The School now comprises of five Departments- Inorganic, Organic, Physical, Natural Products and Materials Science with a faculty strength of 22 endowed with rich teaching and research expertise in diverse frontier areas such as Natural products isolations and synthesis, Electrochemical biosensors, Optical biosensors, synthesis of novel organic molecules and its various applications, Supramolecular chemistry and its molecular recognition studies, Photocatalysis, Green Chemistry, metal complexes Non-heme enzyme models, nanomaterial synthesis and applications, fuel cells, dye sensitized solar cells etc., and The School offers M.Sc., M.Phil., PG Diploma course an Ph.D programs and currently, around 120 scholars are engaged in research work for their Ph.D. The students are highly placed in teaching and research positions and industries both in India and abroad. The School has made more than 625 publications in reputed international and national journals in the last five years. The School has been recognized under the UGC-DRS (Phase-I), UGC-SAP(I), UGC-ASIST and DST-FIST programme.



Objective of e-Conference

Electrochemical techniques for the quantification of any analytes especially in clinical chemistry have been ideally suited for plenty of new applications, due to their high sensitivity and selectivity, portable field-based size, rapid response time and low-cost when compare to other sophisticated lab related techniques. Electrochemical sensors are generally based upon potentiometric, amperometric, or conductivity measurements and different principles are always requiring a specific design of the electrochemical cell. This e-conference is expected to provide an overview of the advancement and on - going electrochemical techniques in the field of Electrochemistry related science implications, future opportunities as well as impending targets. This conference also looks on the innovative and recent electrochemical methods, ideas, advances, recent updated technologies and applications in the field of electro analytical chemistry. Though, plenty of biosensors have been reported for various analytes to till date, designing of portable/miniaturized device is considered as a crucial factor. Hence, this conference will enhance your research carrier in this particular field and provides a unique platform for the people who have been working with these specialized problems or challenges in clinical diagnostics concern. This e-conference captivates all the science crews among the electrochemical society including post graduate students. It provides an excellent opportunity by amalgamating well renown Professors, Researchers under a single link and also assists to address your innovative research ideas, challenges so far facing in handling electrochemical instruments/techniques , and commercialization of sensors

- To elaborate the detailed applications of electrochemical techniques in recent field
- To enlighten the usage of various electrochemical methods and its handling practices among concept among PG Students, Researchers, Faculty etc.,
- To describe a brief introduction and conceptualization of electrochemical techniques in the development of sensors.
- To highlight the need of commercialization of miniaturized device

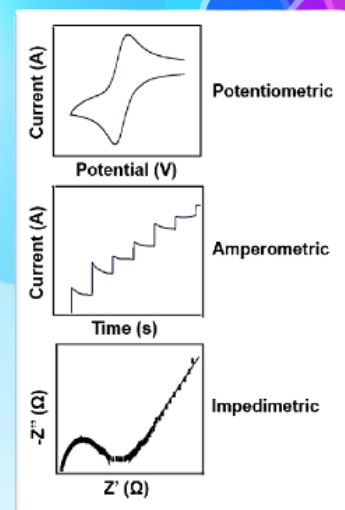
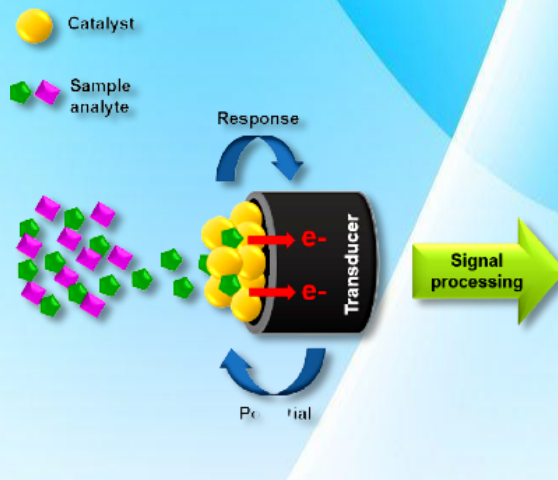
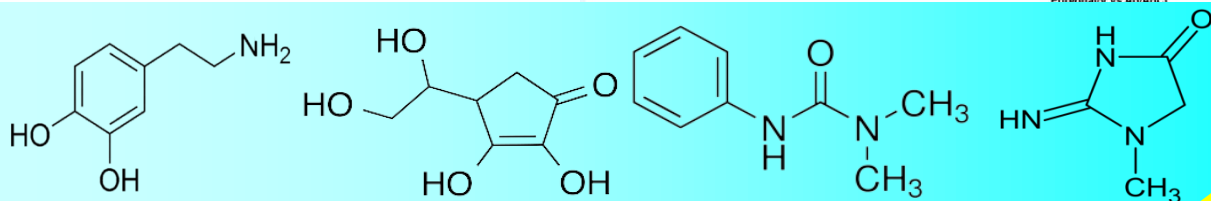
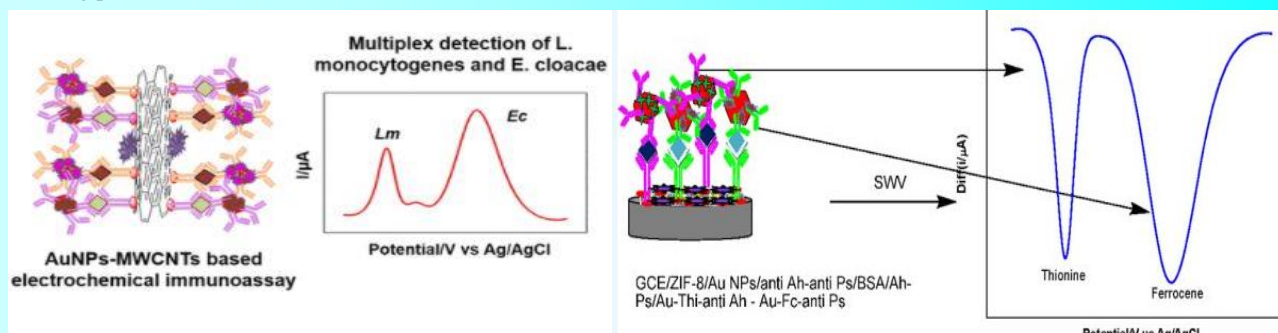


Programme Outcome

This e-conference will stimulate the technical knowledge in the minds of young researchers, and Faculty members who are interested to do research on Electrochemistry. It will assist to create novel ideas, giving solutions for instrument handling, characterizations and its various applications of electrochemical techniques and development of sensors among scholars. The major features of this e- programme include understanding the basic principles behind electrochemical techniques and utilize them for various and recent catalytic applications in sensors.

About Our Research Group

Our crew is mainly working on the development of biosensors using Electrochemical as well as Optical detection methods using nanomaterials, composites, synthetic fluorophores and isolation of natural products and their clinical applications. We are mainly focusing on determination of important clinical relevant biomolecules, pathogens, toxins, pesticides, and some heavy metal ions and developed so many biosensors, Immunosensors (Single and multiple), and chemical sensors using nanomaterials, synthetic fluorophores, and natural products. In this regard, we have published a plenty of research articles in well reputed Journals like Nature Scientific Reports, ACS Sensors, Journal of Agriculture and Food Chemistry, Biosensors & Bioelectronics Food Chemistry, Electrochimica Acta, Analytica Chimica Acta, Spectrochimica Acta etc., Our group has mainly focused on the designing the biosensors based on the interaction between the analytes and sensing platforms.



Main Theme

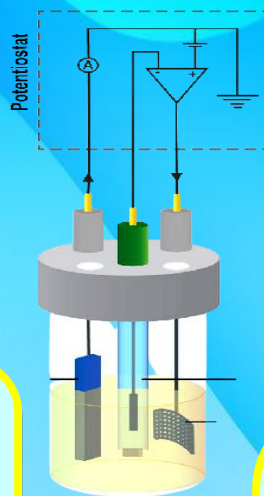
- Basic Principles of electrochemical techniques in the development of sensors for clinical and environmental applications
- Synthesis of Novel Nano materials, characterization and their catalytic applications
- Development of electrochemical sensors and their recent applications
- Synthesis or Novel Organic Molecules and their electrochemical applications

Call for Papers

ETADS-22 invites established and early career Professors, scientists research scholars, academicians, and industrialists of chemistry and other disciplines to present their research findings as oral or poster presentations in this conference. The papers will be published in the Abstract E-book of the Conference and also in our university proceedings.

*Note:

- Only 250 participants are allowed on first come first serve basis.
- Totally 25 students presentation (15 O + 10 P) are permitted based on the shortlists (it may be increased based on the situation & demand)



Important Dates

Registration Begins: 28.12.2021

Last date for e-registration: 15.01.2022

Last date for receiving e-Abstract: 16.01.2022

Notification of shortlisted participants: 18.01.2022

Prof. V.S. Vasantha

**CONVENER-ETADS-22
Registrar (i/c)**

Head- Dept. of Natural Products Chemistry
School of Chemistry
Madurai Kamaraj University
Madurai, Tamil Nadu, India



Guidelines for E- Abstract

Separate Template has given for making abstracts and the same has to be submitted to etads2022mku@gmail.com

Guidelines for Oral/Poster

Oral Presentation

No. of slides: 10

Time: 7 mins (5+2)

For single-slide e-posters

Set the page size to 36.5"W and 20.5"H.

Don't overcrowd the slide.

No. of slides: 1

Time: 5 mins (3+2)

*Note: Separate templates will give for shortlisted participants.

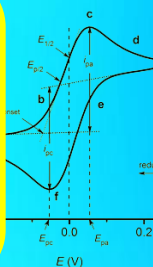
Keynote Speakers



Prof. Mamas (Mamantos) Prodrromidis

Editor-in-Chief, *Microchimica Acta*

University of Ioannina
Department of Chemistry
Laboratory of Analytical Chemistry
Ioannina, GREECE



Prof. Alain Walcarius

Editorial Member

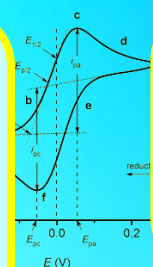
Sensors and Actuators B: Chemical
Research Director at CNRS Professional
Laboratory of Physical Chemistry and
Microbiology for the Environment (LCPME)
CNRS – Lorraine University, France



Dr. Netz Arroyo, Ph. D.

Associate Editor, *Journal of the Electrochemical Society*

Assistant Professor, Pharmacology and Molecular Sciences
Joint Faculty, Chemical and Biomolecular Engineering
Member, Institute for Nanobiotechnology
Johns Hopkins University School of Medicine
Baltimore, MD 21205, USA



Prof. Ajit Khosla

Editor-in-Chief, *EC5 Sensors Plus*

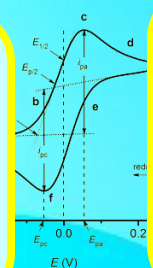
Department of Mechanical Systems Engineering
Faculty of Engineering,
Yamagata University
Jonan, Yonezawa, Japan



Dr. Mathew T. Mathew

Associate Professor and Director of Faculty Research

CW. Blazer Professor of Biomedical Science
Department of Biomedical Sciences
College of Medicine at Rockford
Department of Bioengineering, UIC-Chicago
Department of Orthopedics, RUMC, Chicago, USA



Dr. Pranjal Chandra

Associate Editor

**Sensors International, CAS-Elsevier Science
Frontiers in Bioengineering and Biotechnology**

Assistant Professor & Ramanujan Fellow
Laboratory of Bio-Physio Sensors
Department of Biochemical Engineering
Indian Institute of Technology (BHU) Varanasi
Uttar Pradesh, India



Dr. S. Senthilkumar, MSc., PhD., Principal Scientist

Electrodics and Electrocatalysis Division
CSIR-Central Electrochemical Research Institute
Karaikudi, Tamil Nadu, India



Dr. V Murugan

Scientist

Electrodics and Electrocatalysis Division
CSIR-Central Electrochemical Research Institute
Karaikudi, Tamil Nadu, India



Dr. K Giribabu Scientist

Electrodics and Electrocatalysis Division
CSIR-Central Electrochemical Research Institute
Karaikudi, Tamil Nadu, India



Members

Department of Natural Products Chemistry

Dr. P. Suresh

Assistant Professor

Dr. M. Rajan

Assistant Professor

Dr. A. Dhakshinamoorthy

Assistant Professor



For Assistance

Dr. S. Ellairaja and Mr. P. Ananthappan

Mobile: 8667880370; 9042109940

E-mail id: etads2022mku@gmail.com

Website: <https://sites.google.com/view/etads-2022mku/home>