

**Dr. Zafna Rasheed**

**Assistant Professor and Head**

Department of Chemistry

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## **EDUCATION**

- (a) **Ph.D. in Analytical Chemistry** - Title of the thesis: “Development of electrochemical and fluorescence sensors for food additives and clinically significant molecules”. From Department of Applied Chemistry, Cochin University of Science and Technology, India, 2019.
- (b) **UGC JRF** qualified in the year 2009
- (c) **SET** Qualified in the year 2006
- (d) **MPhil in Chemistry** - Title of the thesis: “Determination of Diclofenac Sodium by AAS”. From Department of Applied Chemistry, Cochin University of Science and Technology, India, 2008.
- (e) **Master of Science (M.Sc)** in Chemistry – Sacred Heart College, Thevara, M.G. University, Kottayam, 2005.
- (f) **Bachelor of Education (B.Ed)** in Physical Science – St Joseph’s college of Teacher Education for Women, 2006.
- (g) **Bachelor of Science (B.Sc)** in Chemistry – The Cochin College, Kochi 2, M.G. University, Kottayam, 2003. (**M G University 3<sup>rd</sup> Rank**)

## **AREAS OF RESEARCH**

- Development of Chemical sensors – Electrochemical sensors and Fluorescent sensors.
- Chemically modified electrodes – Carbon nanotube, polymer films modified electrodes.
- Synthesis and Characterisation of Nanomaterials, its application as colorimetric and fluorimetric sensors.
- Nanomaterial-protein conjugated systems as sensor probes.
- Detection and determination of Food additives, Pharmaceuticals and biological molecules.

## **FORMER JOB EXPERIENCE**

- Scientific Officer at Forensic Science Laboratory, Department of Police, Kerala
- Postal Assistant at Department of Posts, India.
- Guest lecture at Department of Chemistry (MSc), The Cochin College, Kochi 2.

## **TECHNICAL SKILLS**

Proficiency in Handling Electrochemical workstation, UV-Vis spectrophotometer, Fluorimeter, Atomic absorption spectrophotometer (AAS).

## **PUBLICATIONS**

- [1] A biopolymer-based voltammetric sensor for thymine: Elucidation of electrochemical kinetics. S. Jesny, **Z. Rasheed**, K. Girish Kumar, *Ionics*, 23, 1533 (2017).
- [2] Study of kinetic parameters and development of a voltammetric sensor for the determination of butylated hydroxyanisole (BHA) in oil samples. D. Thomas, **Z. Rasheed**, J. S. Jagan, K. Girish Kumar, *Journal of Food Science and Technology*, 52, 6719 (2015).
- [3] Diffusion controlled process at an AuNP/Pt electrode surface for the voltammetric determination of TAM, T. Jos, L. Lonappan, E.V. Anuja, **Z. Rasheed**, K. Girish Kumar, *Journal of Pharmaceutical Research and Development*, 2, 224 (2013).

- [4] Voltammetric determination of guaifenesin on a MWCNT modified Pt electrode, T. Jos, L. Lonappan, **Z. Rasheed**, E.V. Anuja, K. Girish Kumar, *Electrochemistry Letters*, **3**, B23 (2014).
- [5] MWCNT modified gold electrode sensor for the determination of propyl gallate in vegetable oils, E.V. Anuja, **Z. Rasheed**, L. Lonappan, L. Rajith, K. Girish Kumar, *Food Analytical Methods*, **6**, 775 (2013).
- [6] Carbon-nanotube-based sensor for the determination of butylated hydroxyl anisole in food samples. **Z. Rasheed**, E. V. Anuja, D. Thomas, J. S. Jagan, K. Girish Kumar, *Food Analytical Methods*, **8**, 213 (2014).

### **CONFERENCE PAPERS**

- Electrochemical sensing of Amaranth based on poly (4-amino-3-hydroxynaphthalene-1-sulfonic acid) modified glassy carbon electrode (International conference on the Materials for the Millennium, MATCON 2023; CUSAT, Kochi, March 2019)
- Electrochemical sensing of Ponceau 6R based on poly (p-amino benzenesulfonic acid) modified glassy carbon electrode (International conference on the Materials for the Millennium, MATCON 2019; CUSAT, Kochi, March 2019)
- Protein conjugated Gold Nanoclusters for selective determination of Nimesulide (National Seminar on Current Trends in Chemistry, CTriC 2018; Cochin University of Science and Technology, Kochi, February 2018)
- Poly(p-toluene sulfonic acid) based sensor for the determination of Melatonin (National Seminar on Current Trends in Chemistry, CTriC 2017; Cochin University of Science and Technology, Kochi, February 2017)
- Voltammetric determination of Melatonin using poly(p-Toluene sulphonic acid) modified glassy carbon electrode (Prof. K.V. Thomas Endowment International Symposium on New trends in Applied Chemistry (NTAC-2017); Sacred Heart College, Thevara, February 2017)
- Polyglycine Modified Glassy Carbon Electrode for the Voltammetric Determination of Azorubine in soft drinks (MatCon 2016, CUSAT , Kochi, January 2016)

- Development of multi walled carbon nanotube modified Pt electrode for the determination of BHA (ICBAM 2012, Gandhigram Rural Institute- Deemed University, March 2013, Tamil Nadu).

### **MEMBERSHIPS:**

1. Life member of Indian Society for Electroanalytical Chemistry (ISEAC) which aims to promote Electrochemical Sciences and Technologies in India.
2. Life member of Swadesi Science movement.

### **PERSONAL DETAILS**

Date of Birth: 22/11/1982

Fathers Name: P A Abdul Rasheed

Nationality: Indian

Religion: Islam

Caste: Muslim

Marital status: Married

Spouse: Siyad K K

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