

INTERNATIONAL VIRTUAL CONFERENCE ON RENEWABLE ENERGY SCIENCE AND TECHNOLOGY - (ICREST -2020)

28-29 September, 2020



Department of Energy Science
Alagappa University

(Accredited with 'A+' Grade by NACC with 3.64 CGPA in the Third Cycle)

Karaikudi, Tamil Nadu, India – 630 003



22 September 2020

To

Dr. P. Manikandan
Assistant Professor
Department of Chemistry
Kongu Engineering College
Kongu Nagar, Perundurai

Dear Dr. P. Manikandan,
Greetings from Department of Energy Science, Alagappa University!!

I am pleased to inform you that the Department of Energy Science, Alagappa University, Karaikudi is organizing an “**International Virtual Conference on Renewable Energy Science and Technology**” (ICREST-2020) during 28-29 September 2020. I cordially invite you to chair the oral presentation session on 29th September 2020.

I request you to kindly confirm your participation.

With regards,

Yours sincerely

Scrupulous 22/9/2020

(Dr. S. KARUPPUCHAMY)

Convener & Organizing Secretary ICREST 2020
Dr. S. Karuppuchamy
Professor and Head
Department of Energy Science
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Karaikudi-630 003, Tamilnadu, India

PAPER



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Luminescent halogen-substituted 2-(*N*-arylimino)pyrrolyl boron complexes: the internal heavy-atom effect†

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A group of new boron complexes [BPh₂{κ²*N,N'*-NC₄H₃-2-C(H)=N-C₆H₄X}] (X = 4-Cl **4c**, 4-Br **4d**, 4-I **4e**, 3-Br **4f**, 2-Br **4g**, 2-I **4h**) containing different halogens as substituents in the *N*-aryl ring have been synthesized and characterized in terms of their molecular properties. Their photophysical characteristics have been thoroughly studied in order to understand whether these complexes exhibit an internal heavy-atom effect. Phosphorescence emission was found for some of the synthesized halogen-substituted boron molecules, particularly for **4g** and **4h**. DFT and TDDFT calculations showed that the lower energy absorption band resulted from the HOMO to LUMO (π–π*) transition, except for 2-I **4h**, where the HOMO–1 to LUMO transition was also involved. The strong participation of iodine orbitals in HOMO–1 is reflected in the calculated absorption spectra of the iodine derivatives, especially 2-I **4h**, when spin–orbit coupling (SOC) was included. Organic light-emitting diodes (OLEDs) based on these complexes, in the neat form or dispersed in a matrix, were also fabricated and tested. The devices based on films prepared by thermal vacuum deposition showed the best performance. When neat complexes were used, a maximum luminance (*L*_{max}) of 1812 cd m^{–2} was obtained, with a maximum external quantum efficiency (EQE_{max}) of 0.15%. An EQE_{max} of ca. 1% along with a maximum luminance of 494 cd m^{–2} were obtained for a device fabricated by co-deposition of the boron complex and a host compound (1,3-bis(*N*-carbazolyl)benzene, mCP).

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† Electronic supplementary information (ESI) available. Several subsections, also including CCDC 2004594–2004596. For ESI and crystallographic data in CIF or other electronic format see DOI: 10.1039/D0DT01845G

1. Introduction

After the report of the first multi-layered organic-light emitting diodes (OLEDs), by Tang and Van Slyke,¹ many improvements have been achieved in this type of technology to the point of their being nowadays present in commercially available flat displays and lighting applications. In spite of this achievement, there is a continuous search for enhancements in this technology aiming to obtain better brightness, flexibility, stability and lower production costs.

In the production of luminescent emitters, there is already a variety of options based on fluorescent and/or phosphorescent chromophores, or in the newest thermally activated delayed fluorescent (TADF) molecules.² Tetracoordinate boron complexes containing bidentate *N,N*-, *N,O*-, *N,C*-, *C,C*-, *C,O*- and *O,O*- ligands gave rise to particularly interesting luminescent chromophores, some of them used in OLED devices with good electroluminescent properties.^{3,4}

Our research group has already developed a reasonable number of tetracoordinate boron complexes bearing a 2-(*N*-

Application of electrochemical treatment for the removal of triazine dye using aluminium electrodes

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Manikandan Palanichamy and Dinh Duc Nguyen

ABSTRACT

Textile effluents contain triazine-substituted reactive dyes that cause health problems such as cancer, birth defects, and hormone damage. An electrochemical process was employed effectively to degrade azo reactive dye with the aim of reducing the production of carcinogenic chemicals during biodegradation. Textile dye C.I. Reactive Red 2 (RR2), a model pollutant that contains dichloro triazine ring, was subjected to the electrocoagulation process using aluminium (Al) electrodes. A maximum of 97% of colour and 72% of chemical oxygen demand (COD) removal efficiencies were achieved and 9.5 kWh/kg dye electrical energy and 0.8 kg Al/kg dye electrode consumption were observed. The dye removal mechanism was studied by analysing the results of UV-Vis spectra of RR2 and treated samples at various time intervals during electrocoagulation. Fourier transform infrared (FTIR) spectra and energy dispersive X-ray (EDX) spectral studies were used for analysing the electrocoagulated flocs. The results indicate that in this process the dye gets removed by adsorption and there is no significant carcinogenic by-product formation during the degradation of dye.

Key words | chemical oxygen demand, degradation, electrochemical process, textile dye, textile effluent

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INTRODUCTION

Textile industries use different types of fabrics for dyeing and produce large quantities of wastewater. Approximately 1,000–3,000 m³ of wastewater is produced for every 10,886.2–18,143.7 kg of textile fabrics processed (Al-Kdasi *et al.* 2004). Textile wastewater consists of unfixed dyes, inorganic and organic chemicals and trace metals that are harmful to the environment and can cause haemorrhage, nausea, skin diseases, cancer, and mutagenesis (Ghaly *et al.* 2014). Textile wastewater is

characterised by high colour content due to the presence of unfixed dyes, which affects its biodegradability by reducing the penetration of light and decreases the dissolved oxygen content (Muthukumar *et al.* 2007). The fixation of dyes on fabrics depends on the nature of the dyes and fabrics. To increase fixation, heterofunctional dyes such as sulfonic and chlorine substituted triazine groups containing azo dyes are used in industries; however, dyes containing chloro-substituted triazines are easily

RESEARCH ARTICLE



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New luminescent tetracoordinate boron complexes: an in-depth experimental and theoretical characterisation and their application in OLEDs†

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A group of new tetracoordinate mononuclear 2-(*N*-phenylformimino)pyrrolyl boron chelates [BX₂(κ²*N,N'*-NC₄H₃-2-C(H)=N-C₆H₅)] (X = F **3**; mesityl (2,4,6-trimethylphenyl, Mes) **4**; C₆F₅ **5**; X₂ = 1,1'-biphenyl-2,2'-diyl **6**) and the related binuclear complex [(C₆F₅)₂B(κ²*N,N'*-NC₄H₃-2-C(H)=N-C₆H₄-N=C(H)-C₄H₃-N-κ²*N,N'*)B(C₆F₅)₂] **7** were synthesised via metathetic exchange reactions of sodium 2-(*N*-phenylformimino)pyrrolyl with BF₃·Et₂O (**3**), BMes₂F (**4**) and 9-chloro-9-borfluorene (**6**), whereas **5** and **7** were obtained from the acid–base reactions between the corresponding neutral ligand precursors, respectively 2-(*N*-phenylformimino)pyrrole (**1**) and 1,4-(HNC₄H₃-C(H)=N)₂-C₆H₄ (**2**), with B(C₆F₅)₂OEt. These complexes were designed to evaluate the influence of the boron co-ligands on the molecular properties of the corresponding 2-iminopyrrolyl tetrahedral boron derivatives, particularly on luminescence. Compounds **3–7** were photophysically characterised in solution and in solid state, exhibiting blue to yellowish-green emissions and fluorescence quantum yields (φ_f) up to 0.40. The exception was complex **4**, which revealed full fluorescence quenching owing to a dynamic equilibrium involving the bidentate (tetracoordinate) 2-iminopyrrolyl boron complex and the corresponding monodentate (tricoordinate) species. DFT and TDDFT studies were carried out, considering the effect of solvent and also of dispersion forces, in order to elucidate the change in geometries of compounds **3–7** from the ground to the singlet excited state, to understand the dynamic equilibrium of **4**, to ascribe electronic transitions, and to rationalise the observed luminescence and also the main trends of thermal stabilities. These complexes were applied in organic light-emitting diodes (OLEDs), the ones based on complex **6** showing the best performances (maximum luminance of 170 cd m⁻² and electroluminescence efficiency of 0.037 cd A⁻¹).

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Analysing the nature of plasma and blood flow using exact roving wave solutions of fifth order rove-time equation

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Abstract. In this paper, the nonlinear higher order differential scrupulous equations share in countless spectacles in Physics such as Fluid dynamics, Hydro dynamics, Optics, Plasma physics and so on. The exact solutions of fifth order Kaup-Kupershmit equation describe the excitations and dynamics of ionised particles such as blood and plasmas which is an essential bodily function. Here the generalised Kudrayashov method is entertained for finding the exact solutions of fifth order KdV equation and for discovering precise roving wave solutions mutable to the solitary wave solutions for Kaup-Kupershmit equation. Among the voluminous methods, generalised Kudrayashov method is very imperative and produces the knowledge of Plasma dynamics.

Keywords: nonlinear higher order differential scrupulous equations, Kaup-Kupershmit equation, Kudrayashov method, roving wave solutions, Plasma dynamics.

1. Introduction

The nonlinear higher order differential equations are chief focuses in Physics discipline [1]. Scrupulous explanations for these reckonings accomplish an imperative share in countless spectacles. Freshly voluminous new-fangled styles for importing these brilliances have been anticipated [2-42], for specimen, the Kudryashov method [43-48]. The intention of validating the adeptness of the comprehensive Kudryashov method for discovering precise roving wave tenacities mutable to the solitary wave tenacities for fifth order Kaup-Kupershmit equation.

2. Model and Dynamics



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Tetrapropylammonium Tribromocuprate Complex $[(C_3H_7)_4N]CuBr_3(II)$ - Synthesis, Thermal and Spectral Characterization

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ABSTRACT

Due to their interesting physical properties like ferroelastic, ferroelectric and commensurate – incommensurate phases at low temperatures, the importance of ABX_3 complex (A=univalent cation, $NH_4^{(+)}$ and its alkyl derivatives; B= divalent transition metal cation and X=halogen) has been gained more interest in recent years. Materials in good crystalline form are needed in modern technologies using semiconductors, magnetic garnets and ultraviolet and infrared solid-state lasers. The TTPATBr-Cu complex type ABX_3 was grown by a slow evaporation process at room temperature. The synthesised complex is characterised by an elementary analysis, powder X-ray diffraction, thermogravimetric and differential thermal analysis. The synthesised complex is analysed by FTIR, proton and carbon-13 NMR spectrally. Elemental analysis data obtained for the complex confirm the molecular formulae $[(CH_3CH_2CH_2)_4N]_2CuBr_3(II)$. The IR spectrum of the complex confirms the presence of methyl and methylene groups in the complex. The IR spectra also confirm the presence of C-C and C-N bonds. The NMR spectra suggest the presence of N-propyl group in the complex. TG-DTG thermogram indicates that the final decomposition of the complex starts from 809°C to form the end product. The prepared complex can be used for optical and biological applications.

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1. Introduction

Metal complexes play a versatile role in all the fields due to their physicochemical and biological properties. In industrially important electronic diligences, noble crystals of sufficient size and precision are expected. Simply because of the amazing growth in the assembling of large yet relatively flawless crystals prompt indications of advances in microelectronics and networking technology and medical devices, energy and space technologies are probable. Light diodes with high efficiency to save energy and photovoltaic devices for the conversion of solar and other radiation into high-input electricity rely on large distributions in a field of crystal growth. The creation of crystals is a therapeutic and industrial topic. For the treatment of the drug's interfaces in the human body, a broad molecule configuration and its intermobility are

essential based upon major advances in the field of the crystal. Subsequently, The growth from solution technologies was involved here among the three simple crystal growing techniques.

From the intriguing physical properties, the value of ABX_3 crystals in contemporary years has been acquired (in which A = cation, $NH_4^{(+)}$ and their alkyl derivatives; B = transition cation and X = halogen)[1–2].

An analysis of literature on ABX_3 type complexes have been carried out. Tetra methyl ammonium trihalogeno metallic complex which have the typical chemical formula of $N(CH_3)_4 BX_3$ are classified as quasi one- dimensional magnetic materials. A lot of study has then been carried out both experimentally and theoretically on their magnetic properties and magnetic phase transitions. Gesi[3] performed a study of the sequences of transition and dielectric characteristics $[N(CH_3)_4]_2MX_3$ crystals. The $[N(CH_3)_4] MnCl_3$ representative complex has been commonly shortened to TMMnC. Any of these compounds crystallise hexagonally at room temperature $p63/m$ ($Z=2$). For such compounds the room temper-

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Systematic measurements of charge transfer complexes caused from 1-phenyl-1,2,3,4-tetrahydroisoquinoline and 4-aminoacetanilide with series of π -acceptors (BQ, DDQ, TCNQ)

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ABSTRACT

Molecular charge-transfer interaction of a series of electron π -acceptors of 1,4-benzoquinone (BQ), 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ) and Tetracyanoquinodimethane (TCNQ) with selected donors of 1-phenyl-1,2,3,4-tetrahydroisoquinoline (PTHIQ) and 4-aminoacetanilide (ACE) have been studied in methanol at room temperature. The stoichiometry of the complexes was determined by photometric titration method and was found to be 1:1, in all the cases. Spectro-kinetic interaction studies along with rate constants and observed formation constants (K) indicated that the strength of the complex formations is PTHIQ-BQ < PTHIQ-DDQ < PTHIQ-TCNQ. Also, Similar observations happened in ACE-BQ and < ACE-DDQ < ACE-TCNQ systems. FT-IR results indicated that the point of interaction was identifying in NH moiety of PTHIQ and NH₂ moiety of ACE with series of π -acceptor complexes. The experimental results were compared with Ab initio DFT calculations at the B3LYP/6-31 + G(d) level of theory. The increasing order of the experimentally measured formation constant of CT-complexes (PTHIQ and ACE with series of acceptors) was well supported by theoretical HOMO-LUMO energy gap and drastically changes in Mulliken charges of NH moiety of PTHIQ, NH₂ moiety of ACE with complexation with acceptors.

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1. Introduction

Charge transfer (CT) complexes of biologically significant quinones with a variety of donors have been studied in recent years, because of their wide applications ranging from different fields [1–4]. In the field of material science which can be used as organic semiconductors, photocatalysts and redox reagents [5–9]. In natural biological systems quinones present in the form of substituted p-benzoquinones such as plastoquinones [10], Vitamin K [11], ubiquinones [12], etc. These biologically significant quinones possess the variable number of methoxy groups and these species interact with crucial cellular molecules such as DNA, proteins and oxygen fine-tuning their biological activity by accepting the electrons in the correct site [13,14].

The study of the charge-transfer (CT) or proton-transfer complexation of drugs with acceptors is currently of considerable importance in life sciences, medicine, pharmacology, and chemistry. Drug-acceptor interaction is an important technique that is cheaper, simpler and more

efficient than other methods of drug estimation. Also, the study of this molecular interaction process play extremely important roles in many biological processes; therefore, understanding these interactions is significant for the recognition of drug-receptor binding and the drug's mechanism of action as well as for obtaining quantitative estimates of drugs [15–17]. However, fine-tuning of the electron-accepting properties of quinone is required to achieve some applications. And also, investigated their redox chemistry of the substituted quinones and documented their biological activities of such systems [18,37]. However, literature a good amount of work has been carried out [19–24] on the study of CT complexes of variety of quinones with a different selection of donors and the present reports related to systematic variation of substituent's in the 1,4-benzoquinones are rare in literature. The main objective of the present attempt is a systematic study of the charge transfer complexes of PTHIQ and ACE with different 1,4-benzoquinones possessing varying electron-withdrawing groups to understand the mechanism of interactions. To support the experimental results we have performed to complete optimization of a series of quinones, donors and their complexes using the Density Functional Theory (DFT) and correlate the theoretical energy gap (ΔE), binding energy (E_{bind}) with experimental formations constants (K).

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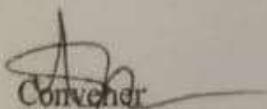
Mrs. A.Raji
ASP / Chemistry
Convener

To

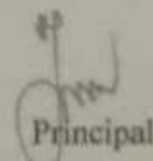
Dr. P.N.PALANISAMY,
Professor and Head,
Department of Chemistry,
Kongu Engineering College,
Erode.

Respected Sir/Madam,

Greetings from Sri Shakthi Institute of Engineering and Technology, Coimbatore, Tamilnadu, India. We would like to appreciate **Dr. P.N.PALANISAMY**, Professor and Head, Department of Chemistry, Kongu Engineering College acted as resource person for the Guest Lecture on the topic "**Corrosion and its control**" to be held in ZOOM video conferencing on February 12th 2021.


Convener




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06.02.2021

Mr. P. Saravanakumar
AP / Chemistry
Convener

To

Dr. A. GEETHA,
Associate Professor,
Department of Chemistry,
Kongu Engineering College,
Erode.

Respected Sir/Madam,

Greetings from Sri Shakthi Institute of Engineering and Technology, Coimbatore, Tamilnadu, India. We would like to appreciate Dr. A. GEETHA, Associate Professor, Department of Chemistry, Kongu Engineering College acted as resource person for the Guest Lecture on the topic "An Introduction to Nanotechnology and its Applications" to be held in ZOOM video conferencing on February 06th 2021.

P. S. 17.
Convener



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Dr.T.Balamurugan, M.E., Ph.D.
Principal

02.04.2021

Letter of Appreciation

It is to certify that **Dr.P.Manikanadan**, Associate Professor, Department of Chemistry, Kongu Engineering College, Perundurai, Erode, has acted as resource person for the Five Day Online Faculty Development Programme on "GE 8291: Environmental Science and Engineering" from 29.03.2021 to 02.04.2021, organized by the Department of Chemistry on **02.04.2021** at Arasu Engineering College, Kumbakonam.

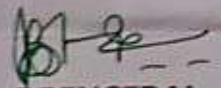
The content and the way in which he delivered the content were highly appreciated by the participants.

On behalf of the Management, Research Committee and the Chemistry Department of Arasu Engineering College, Kumbakonam, I sincerely acknowledge and express our gratitude to **Dr. Dr.P.Manikanadan** for his contribution in the Faculty Development Programme.

To

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Department of Chemistry,
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ARASU ENGINEERING COLLEGE
Kumbakonam - 612 501



A.E.T. COLLEGE

(Affiliated to Periyar University)
Narasingapuram, Attur - 636108.

Certificate of Appreciation

Department of Physics, Chemistry & Botany

This is to certify that

Dr. A. Geetha

*Associate Professor & Head, Department of Chemistry,
Kongu Engineering College, Perundurai.*

was a resource person for the session on "Nanotechnology and Its Applications" Webinar Organized by the Department of Physics, Chemistry and Botany, A.E.T. College, Attur held on 10th June 2021.

Ms. P. SUBHA, M.Sc., M.Phil., B.Ed.,
Programme Coordinator
Head Department of Physics,
A.E.T. College.

Mrs. T. AKILA, M.Sc., M.Phil.,
Head Department of Chemistry,
A.E.T. College.

Dr. K. SHENBAGAM,
Principal,
A.E.T. College.

KARTHIK K <

karthik.k.sci

@kct.ac.in>

Wed 6/16/2021

8:35 PM

To: Dr.P.N.Palanisamy; nrajend

Cc: ARANGANAYAGAM K R <a

Dear Sir/Madam,

Greetings from Kumaraguru College of Technology (Autonomous), Coimbatore, India.

We are glad to inform you that you have been nominated as **Subject expert** for the board of studies of the **Department of Chemistry**, Kumaraguru College of Technology.

As per the telephonic conversation, the Board of Studies meeting is scheduled to be held on 21st June 2021, Monday at 10.15 AM through online mode (MS Teams). I request you to accept the invitation and acknowledge your availability for attending the same.

We cordially invite you to join the meeting by clicking this link:

[https://teams.microsoft.com/l/meetup-](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YWFhZjRmZmEtOTA3Ny00NDhkLWI2MWYtOTVjMjRkODcxOGQ2%40thread.v2/0context=%7b%22Tid%22%3a%226b8b8296-bdff-4ad8-93ad-84bcbf3842f5%22%2c%22Oid%22%3a%22209debc8-1cb8-4117-9749-25dedee0b0f7%22%7d)

[join/19%3ameeting_YWFhZjRmZmEtOTA3Ny00NDhkLWI2MWYtOTVjMjRkODcxOGQ2%40thread.v2/0](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YWFhZjRmZmEtOTA3Ny00NDhkLWI2MWYtOTVjMjRkODcxOGQ2%40thread.v2/0context=%7b%22Tid%22%3a%226b8b8296-bdff-4ad8-93ad-84bcbf3842f5%22%2c%22Oid%22%3a%22209debc8-1cb8-4117-9749-25dedee0b0f7%22%7d)

[context=%7b%22Tid%22%3a%226b8b8296-bdff-4ad8-93ad-](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YWFhZjRmZmEtOTA3Ny00NDhkLWI2MWYtOTVjMjRkODcxOGQ2%40thread.v2/0context=%7b%22Tid%22%3a%226b8b8296-bdff-4ad8-93ad-84bcbf3842f5%22%2c%22Oid%22%3a%22209debc8-1cb8-4117-9749-25dedee0b0f7%22%7d)

[84bcbf3842f5%22%2c%22Oid%22%3a%22209debc8-1cb8-4117-9749-25dedee0b0f7%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YWFhZjRmZmEtOTA3Ny00NDhkLWI2MWYtOTVjMjRkODcxOGQ2%40thread.v2/0context=%7b%22Tid%22%3a%226b8b8296-bdff-4ad8-93ad-84bcbf3842f5%22%2c%22Oid%22%3a%22209debc8-1cb8-4117-9749-25dedee0b0f7%22%7d)

Thank you,

KARTHIK K

BoS Coordinator



VELALAR

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

(Approved by AICTE - NEW DELHI Vide F.No. 732-52-415 (E) 2001)
(Affiliated to Anna University, Chennai.)

Ref.No : VCT / BOS / 060 / 2021 - 22

07.07.2021

To

Dr.P.N.Palanisamy,

Professor & Head,

Department of Chemistry,

Kongu Engineering College,

Perundurai-638052.

Dear Professor,

Sub: Convening the Sixth Board of Studies Meeting Online – Reg.

I am pleased to inform you that you have been nominated as a member of the Board of Studies for the Department of Science and Humanities for the academic year 2021-2022.

In view of the COVID-19 pandemic situation, the Director, Academic courses, Anna University, Chennai has granted permission to conduct the Board of Studies meeting through online.

It has been accepted by all other members of the board that the meeting maybe conducted on 10.07.2021 at 10 am through the zoom app. I am hereby inviting you to share your expertise with us. We will send you our Regulations, Curriculum, the proposed draft of Syllabus and the online link in advance. Honorarium for your participation will be paid as per norms.

Please confirm your acceptance by the return mail.

Thank you,

Yours sincerely,

P. Jayachandran
7.7.21
PRINCIPAL

Velalar College of Engineering and Technology
(Autonomous)
ERODE - 638 012.





Arasu Engineering College

Approved by AICTE & Affiliated to Anna University
(Accredited by NBA | Accredited by NAAC | Recognized by UGC under 2(f) and 12(B))
Chennai Main Road, Kumbakonam - 612 501, Tamil Nadu.
Phone : (0436) 2777 777 - 82



E-mail : arasuengg@aec.org.in arasuengg@gmail.com website: www.aec.org.in

Dr. T. Bala Murugan, M.E., Ph.D.,
Principal

27.07.2021

Letter of Appreciation

It is to certify that **Dr. A. Geetha**, Associate Professor & Head in the Department of Chemistry, Kongu Engineering College, Perundurai, Erode, has acted as a resource person for the webinar on "Basic Research insights into adsorption studies for waste water treatment" organized by the Department of Chemistry, Arasu Engineering College, Kumbakonam on 27.07.2021.

The content and the way in which she delivered the content were highly appreciated by the participants.

On behalf of the Management, Arasu Engineering College, Kumbakonam, I sincerely acknowledge and express our gratitude to **Dr. A. Geetha** for her contribution in the webinar.

PRINCIPAL

PRINCIPAL

ARASU ENGINEERING COLLEGE
Kumbakonam - 612 501

To

Dr. A. Geetha,
Associate Professor & Head,
Department of Chemistry,
Kongu Engineering college,
Perundurai,
Erode.



NEHRU INSTITUTE OF TECHNOLOGY

ISO 14001 : 2004 Certified, Approved by AICTE & Affiliated to Anna University

28.08.2021

Letter of Appreciation

It is to appreciate that **Dr.M.Karthikeyan**, Associate Professor (SG), **Department of Chemistry, Kongu Engineering College, Perundurai**, Erode.Tamilnadu, has acted as resource person for the Six Day Online Faculty Development Programme on "**Innovations in Energy and Applied Chemistry**" from 23.08.2021 to 28.08.2021, organized by the Department of Chemistry on **27.08.2021** at Nehru Institute of Technology, Coimbatore.

The knowledge which he shared was highly appreciated by the participants.

On behalf of the Management, Research and Development cell and the Department of Chemistry of Nehru Institute of Technology, Coimbatore, I sincerely acknowledge and express our gratitude to **Dr.M.Karthikeyan** for his contribution in the Faculty Development Programme.



To

Dr.M.Karthikeyan,
Associate Professor (SG),
Department of Chemistry,
Kongu Engineering College,
Perundurai, Erode.Tamilnadu


PRINCIPAL

PRINCIPAL
NEHRU INSTITUTE OF TECHNOLOGY
"JAWAHAR GARDENS" KALIYAPURAM,
THIRUMALAYAM PALAYAM (PO)
COIMBATORE - 641 105.



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Dr.M.Sivaraja M.E.,Ph.D.,P.D
PRINCIPAL

09.10.2021

Letter of Appreciation

It is to appreciate that **Dr. P.N. Palanisamy**, Professor and Head, Department of Chemistry, Kongu Engineering College, Erode, has acted as a resource person and gave inaugural address for One Day Virtual National Conference on "Energy, Environment and Materials (NCEEM-2021)" on 28.09.2021, jointly organized by the Centre for Environment and Social Research (CESR) & Department of Chemistry, Nehru Institute of Technology, Coimbatore.

On behalf of the Management, Centre for Environment and Social Research and the Department of Chemistry, Nehru Institute of Technology, Coimbatore, I sincerely acknowledge and express our gratitude to **Dr. P.N. Palanisamy** for his contribution in the Conference.



To

Dr. P.N. Palanisamy
Professor and Head,
Department of Chemistry
Kongu Engineering College, Erode.


PRINCIPAL
NEHRU INSTITUTE OF TECHNOLOGY
"JAWAHAR GARDENS," KALLIPURAM,
THIRUMALAYAM PALAYAM (PO)
COIMBATORE - 641 105.

Invitation_BoS meeting Chemistry on 21.12.2021 - Reg.

KARTHIK K <karthik.k.sci@kct.ac.in>

Mon 12/20/2021 4:33 PM

To: Dr.P.N.Palanisamy <drpnp@kongu.ac.in>

Cc: ARANGANAYAGAM K R <aranganayagam.kr.sci@kct.ac.in>

 2 attachments (449 KB)

Dr PNP.pdf; BOS Agenda-21 DEC 2021.pdf;

Dear Sir,

Greetings from Kumaraguru College of Technology (Autonomous), Coimbatore, India.

We are glad to invite you as the Subject Expert Member for the Board of Studies meeting of Chemistry, Kumaraguru College of Technology. Please find the attached invitation.

The Board of Studies meeting is scheduled to be held on 21st December 2021, Tuesday at 10.00 AM through online mode (MS Teams).

The following are the points to be discussed:

1. Four new syllabi for Bridge course
2. Suggestions for the content enhancement in syllabi for the forthcoming revision
3. Inputs towards upgradation of infrastructure /teaching aids to aid content delivery
4. Best Practices followed in (External) Member's Institutions

Kindly join the meeting by clicking the link below.

[Join conversation](#)teams.microsoft.com

Thank You.

K KARTHIK
Coordinator - BoS
Assistant Professor in Chemistry
Department of Chemistry
School of Foundational Sciences
Kumaraguru College of Technology (Autonomous)

Coimbatore - 49