

Web of Science

Search

Search Results

My Tools ▾

Search History

Marked List

Add to Marked List

217 of 752

Physicochemical Investigation, Fluorescence Quenching and Micellization of Ethyl 4-(2,4,5-trimethoxyphenyl)-2-methyl-5-oxo-4,5-dihydro-1H-indeno[1,2-b]pyridine-3-carboxylate (EIPC) in Organized Media

By: Khan, SA (Khan, Salman A.)^[1]; Asiri, AM (Asiri, Abdullah M.)^[1,2]; Al-Thaqafy, SH (Al-Thaqafy, Saad H.)^[1]

[View ResearcherID and ORCID](#)

JOURNAL OF SOLUTION CHEMISTRY

Volume: 45 Issue: 8 Pages: 1115-1129

DOI: 10.1007/s10953-016-0489-3

Published: AUG 2016

[View Journal Impact](#)

Abstract

Ethyl 4-(2,4,5-trimethoxyphenyl)-2-methyl-5-oxo-4,5-dihydro-1H-indeno[1,2-b]pyridine-3-carboxylate (EIPC) was synthesized by a one pot method from the reaction of indane-1,3-dione with 2,4,5-trimethoxy-benzaldehyde, ethyl acetoacetate and ammonium acetate by multi component reaction. Data obtained from elemental analysis and FT-IR, H-1-NMR, C-13-NMR, and EI-MS provide a basis for a reliable chemical structure for EIPC. Electronic absorption and fluorescence spectrum of EIPC were measured in various solvents. EIPC dye shows a red shift in its emission spectrum as the polarity of the solvent increases. This fact indicates that the dipole moment of the EIPC is higher in the singlet excited state than that in the ground state. Fluorescence quenching of EIPC with different alcoholic solvents indicated intermolecular hydrogen bonding interactions between EIPC and the alcohol. The fluorescence spectra of EIPC were investigated in organized media composed of aqueous micellar solutions, showing that they may be used as a probe to determine the critical micelle concentration of sodium dodecyl sulfate and cetyltrimethyl ammonium bromide.

Keywords

Author Keywords: EIPC; Dipole moment; Fluorescence quantum yield; CMC; Fluorescence quenching

KeyWords Plus: QUANTUM YIELD; PHOTOPHYSICAL PROPERTIES; CHROMOPHORES; DERIVATIVES; EMISSION; STATE; PROBE; CTAB; SDS

Author Information

Reprint Address: Khan, SA (reprint author)

King Abdulaziz Univ, Dept Chem, Fac Sci, POB 80203, Jeddah 21589, Saudi Arabia.

Organization-Enhanced Name(s)

King Abdulaziz University

Addresses:

[1] King Abdulaziz Univ, Dept Chem, Fac Sci, POB 80203, Jeddah 21589, Saudi Arabia

Organization-Enhanced Name(s)

King Abdulaziz University

[2] King Abdulaziz Univ, CEAMR, POB 80203, Jeddah 21589, Saudi Arabia

Organization-Enhanced Name(s)

King Abdulaziz University

E-mail Addresses: sahmad_phd@yahoo.co.in

Citation Network

0 Times Cited

[30 Cited References](#)

[View Related Records](#)

 [Create Citation Alert](#)

(data from Web of Science Core Collection)

All Times Cited Counts

0 in All Databases

0 in Web of Science Core Collection

0 in BIOSIS Citation Index

0 in Chinese Science Citation Database

0 in Data Citation Index

0 in Russian Science Citation Index

0 in SciELO Citation Index

Usage Count

Last 180 Days: 1

Since 2013: 7

[Learn more](#)

This record is from:

Web of Science Core Collection
- Science Citation Index Expanded

Suggest a correction

If you would like to improve the quality of the data in this record, please [suggest a correction](#).

Publisher

SPRINGER/PLENUM PUBLISHERS, 233 SPRING ST, NEW YORK, NY 10013 USA

Categories / Classification

Research Areas: Chemistry

Web of Science Categories: Chemistry, Physical

Document Information

Document Type: Article

Language: English

Accession Number: WOS:000382105600001

ISSN: 0095-9782

eISSN: 1572-8927

Other Information

IDS Number: DU3JC

Cited References in Web of Science Core Collection: **30**

Times Cited in Web of Science Core Collection: **0**