

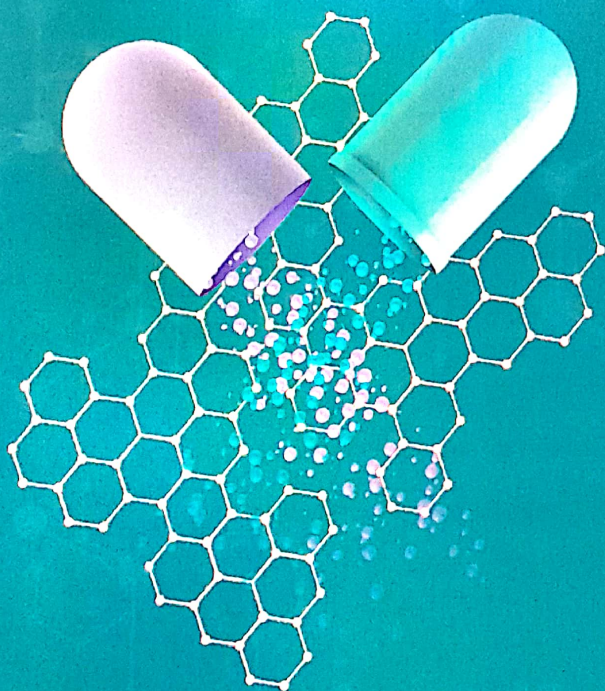


Since 1881

INTERNATIONAL CONFERENCE ON ADVANCES IN CHEMISTRY (ICAC - 2023)

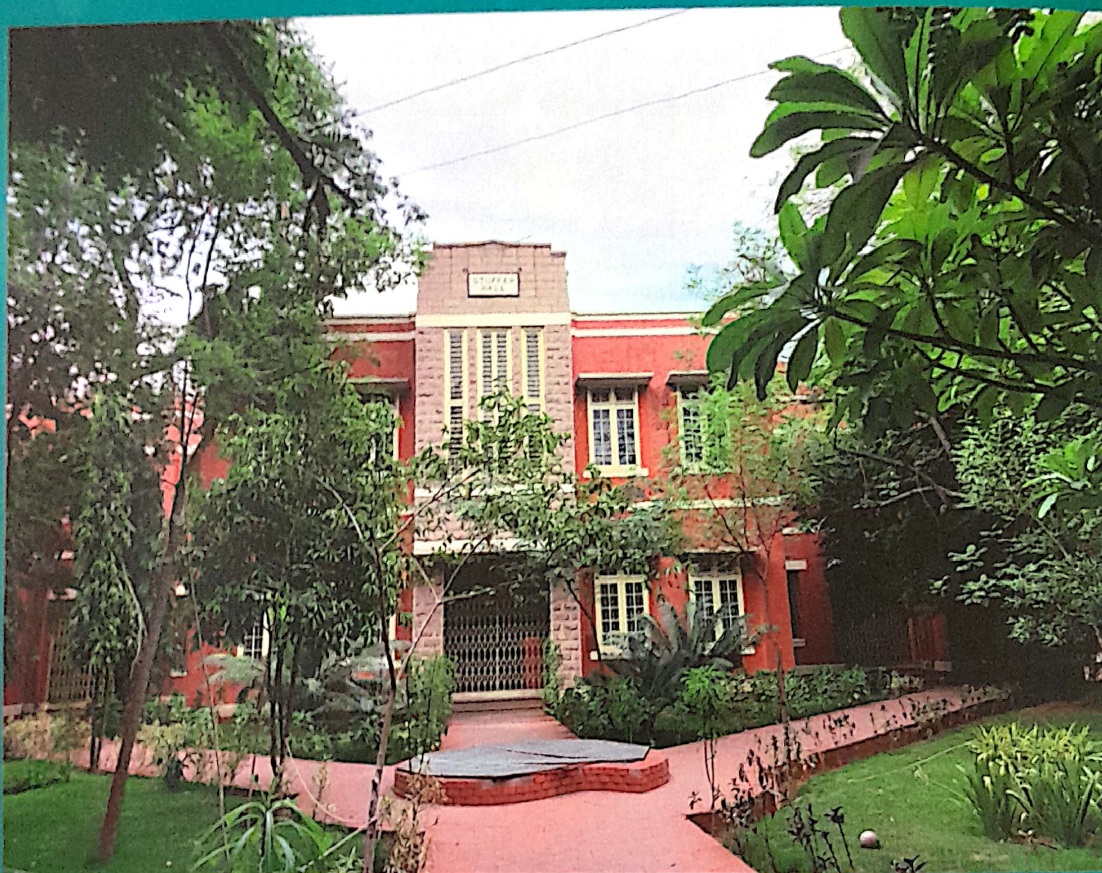
CONFERENCE PROCEEDINGS

4 & 5 DECEMBER 2023



Organised by
Post Graduate & Research Department of Chemistry
The American College, Madurai- 625002
Tamil Nadu, India





ISBN : 978-93-80368-45-0



9 789380 368450



Sponsors:



Scanned with OKEN Scanner

Advisory Board

Prof. M. Periyasamy
University of Hyderabad, Hyderabad

Prof. K. N. Ganesh
SERB National Science Chair, JNCASR,
Bengaluru

Dr. G. Narahari Sastry
Director, CSIR-NEIST, Jorhat

Dr. Prabha N. Ibrahim
Founder, President and CEO ReRx
Therapeutics, USA

Dr. Muthiah Manoharan
Alnylam Pharmaceuticals, USA

Dr. S. Thayumanavan
University of Massachusetts, USA

Dr. U. P. Senthil Kumar
RECEPS Limited, Hyderabad

Dr. Manikandan Lakshmanan
IMCB-Indivumed Joint Lab Singapore

Dr. K. John Adaikalasamy,
Head, Department of Chemistry
The American College, Madurai

Dr. C. Dorothy Sheela
Coordinator, Department of Chemistry (SF)
The American College, Madurai

Dr. S. Jemima Balaselvi Juliana
Associate Professor,
The American College, Madurai

Editorial Board

Dr. J. Helen Ratna Monica
Dr. M. Vathanaruba

Dr. R. Ebenezer
Dr. I. Avinash

ISBN: 978-93-80368-45-0

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, photocopying, recording or any information storage and retrieval system without permission of the author or copyright owners.

DISCLAIMER

The authors are solely responsible for the contents of the papers compiled in this volume. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and the readers are requested to communicate such errors to the editors or publisher to avoid discrepancies in future.

Published by

PG & Research Department of Chemistry

The American College, Madurai,
(An autonomous institution affiliated to Madurai Kamaraj University
Re-Accredited (3rd Cycle) by NAAC with Grade 'A+' CGPA 3.47 on a 4 point scale)
Madurai, Tamil Nadu - 625002, India

ISBN : 978-93-80368-45-0



9 789380 368450



Scanned with OKEN Scanner

PP24

ABSTRACT

Synthesis and Characterization of 4,6-O-Protected- β -D-glucosamine based metal Complex

M. Sneka, M. Shanmugapriya, Dr. K.R. Subimol

Department of Chemistry and Fatima College, Madurai
priyamuthupandi2412@gmail.com, snekasundaram2001@gmail.com

Schiff base metallic complexes have received significant attention in the scientific community for their unique properties and versatile applications across various fields, including industry and biology such as antiviral, cytostatic, antibacterial, anticancer, and antifungal properties. In addition, they possess exceptional catalytic activity for a wide range of compounds. Metal saccharide complex have greater importance due to non-toxic nature of the saccharide based ligand. Here we report a saccharide based ligand using 4,6-O-Protected- β -glucosamine with aromatic aldehyde. These ligands has been used for complexing with metal ions such as Li^+ , K^+ , Mg^{2+} , Cd^{2+} , Cu^{2+} , Pd^{2+} , MoO_4^{2-} . The synthesized products are characterized by analytical methods as well as spectral techniques such as ^1H & ^{13}C NMR, FTIR, absorption and FAB mass spectroscopy.

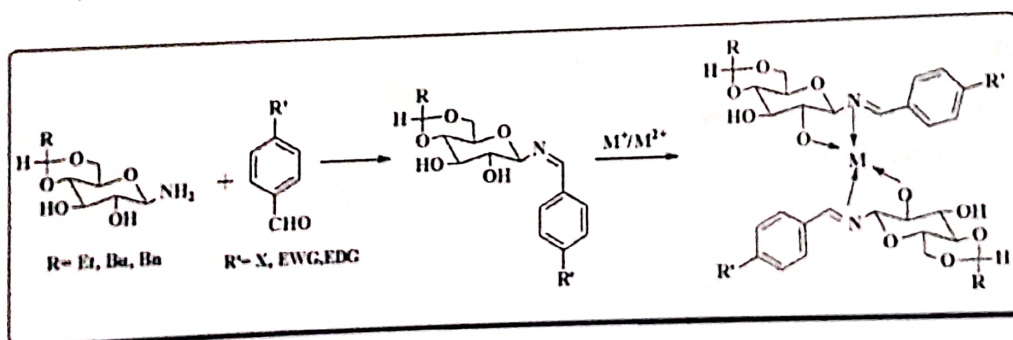


Figure 1: General schemes for the synthesis of saccharide metal complex

References:

- [1] Shang-Cheng, H.; Thopate, S. R.; Cheng-Chung, W.; *Carbohydr. Res.* **2001**, 330, 177-182.
- [2] Sah, A. K.; Rao, C.P.; Saaremketo, P. K.; Wegelius, E. K.; Rissanen, K.; Kolehmainen, E. *J. Chem. Soc. Dalton Trans.* **2000**, 3681-3687.
- [3] Angyal, S.J.; Davies, K. P.; *Complexing of sugar with metal ions*, *J. Chem. Soc. D* **1971**, 131-146.