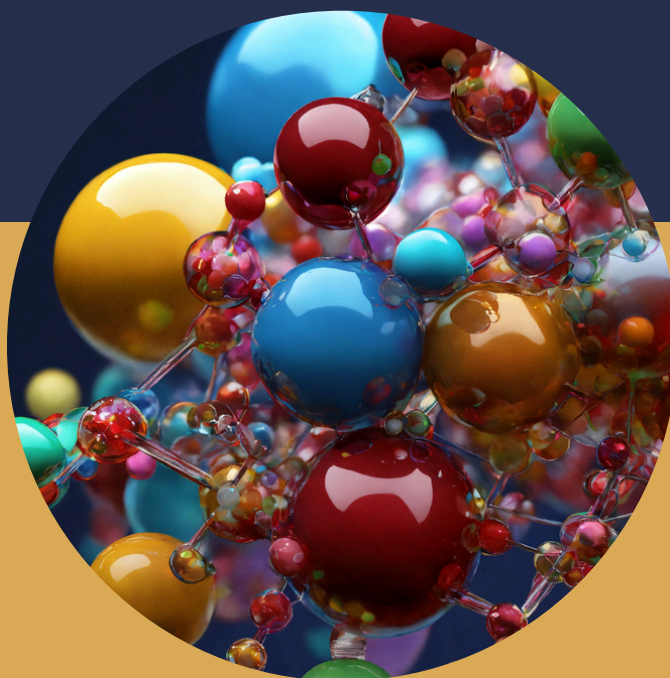


Recent Advances in Chemistry

Dr. Iqbal N. Shaikh
Dr. Mohammed Zamir Ahmed



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Edited By:

Dr. Iqbal N. Shaikh [M.Sc., M.B.A. Ph.D. (Chem)]
Head, Department of Chemistry, PG & Research Centre,
and
In-charge Principal, Poona College of Arts, Science and
Commerce, Camp, Pune-01
(Maharashtra, India)

Dr. Mohammed Zamir Ahmed [M.Sc., Ph.D. (Chem)]
Assistant Professor
Department of Chemistry, PG & Research Centre,
Poona College of Arts, Science and Commerce,
Camp, Pune-01, (Maharashtra, India)

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Preface

It gives us immense pleasure to present this edited volume titled “*Recent Advances in Chemistry*”, a scholarly compilation of research reviews authored by the **post-graduate students** of the Department of Chemistry, Poona College, Pune. This book is a reflection of their academic rigor, curiosity, and dedication towards exploring contemporary issues and developments in the field of chemical sciences.

The content of this volume covers a broad spectrum of topics, including organic, medicinal, computational, and environmental chemistry, showcasing the students' understanding of both fundamental concepts and advanced research methodologies.

This initiative was undertaken to encourage research aptitude, critical thinking, and scientific writing skills among PG students, and to provide them with an opportunity to contribute meaningfully to academic literature. We believe that involving students in such scholarly activities plays a vital role in shaping their scientific outlook and preparing them for future research pursuits.

We are grateful to the faculty members who guided and mentored the students throughout the process, and to all contributors for their hard work and enthusiasm. This volume stands as a testament to the collaborative spirit of learning and inquiry that thrives in our department.

We sincerely hope that *Recent Advances in Chemistry* will serve as an inspiration to budding researchers and as a useful resource for students, teachers, and researchers alike.

Acknowledgement

We take this opportunity to express our heartfelt gratitude to all those who contributed to the successful compilation and publication of this book titled Recent Advances in Chemistry.

*First and foremost, we extend our sincere thanks to the **postgraduate students** of the Department of Chemistry, whose dedication, enthusiasm, and academic efforts have shaped the core of this book. Their contribution in the form of reviews reflects the high standards of learning and inquiry fostered within the department.*

*We are deeply grateful to our respected I/C Principal & Head, Department of Chemistry, **Dr. Iqbal N. Shaikh** for encouraging such academic initiatives and for providing the necessary institutional support.*

*Our sincere appreciation goes to all the **faculty members** of the Department of Chemistry for mentoring the students, reviewing the manuscripts, and providing valuable feedback to ensure the quality of this volume.*

This collaborative effort has not only resulted in a meaningful academic resource but has also provided a platform for young researchers to develop and share their scientific ideas. We hope this volume will be of value to students, educators, and researchers alike.

*Dr. Iqbal N. Shaikh &
Dr. Mohammed Zamir Ahmed*

*Editors
Recent Advances in Chemistry*

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About the Editors



Dr. Iqbal N. Shaikh, M.Sc., M.B.A., Ph.D. is presently working as Head, Department of Chemistry and In-charge Principal of Poona College of Arts, Science and Commerce, Camp, Pune.

He passed both the B. Sc. examination in 1998 and M.Sc. (Specialization in Organic Chemistry) examination in 2000, from Savitribai Phule Pune University (Formerly University of Pune). He has more than 24 years of teaching experience at graduate as well as post-graduate level. He is the recognized research guide for Ph.D. degree of Savitribai Phule Pune University. He also showed his vigorous contribution in paper/poster presentation at International and National level and have total 16 publications in internationally reputed journals having highest impact factor 5.2. He is also the author of 4 Chemistry books and is having 4 Indian patents to his credit. He had participated in more than 75 various International/National/State/District/Local/level Conferences/Seminars/Workshops.

He served as the coordinator, Internal Quality Assurance Cell (IQAC), of Poona College, Pune from 2017-2024 and the college successfully achieved A+ Grade by NAAC under his leadership. He had delivered numerous lectures on understanding the new NAAC Revised Accreditation Framework, understanding of different Criteria/metrics, DVV, Preparation of onsite visit, appeal mechanism etc. in various programs, seminars, workshops organized by HRDC/colleges.



Dr. Mohammed Zamir Ahmed, M.Sc. Ph.D. (Chem) is presently working as an Assistant Professor in the Department of Chemistry, Post-Graduate & Research Centre, AKI's Poona College of Arts, Science & Commerce, Camp, Pune-01. He has earned his doctoral degree from Swami Ramanand Teerth Marathwada University, Nanded.

He has 12+ years of teaching experience at the graduate and post-graduate levels. His research interests are the synthesis of biologically potent heterocyclic compounds and green chemistry. He has published more than 24 research papers in the journals of the international repute. He has guided 15+ PG students in their research projects. He has actively participated and presented papers in 20+ conferences, workshops & seminars. He has worked in various important committees at the college level & organized national and international conferences. He has coordinated various national level events and competitions and capacity building programs for students. He has also worked as a Zonal Supervisor in 214 Pune Cantonment Assembly Constituency, Pune and has been awarded an "Efficient Supervisor Award" for his outstanding work in the purification of the electoral roll.

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