

Nadeem Sadiq Sheikh

(Assistant Professor of Organic Chemistry)

KING FAISAL UNIVERSITY (KFU)

Department of Chemistry, College of Science
P.O. Box 380, Al-Hafouf 31982, Saudi Arabia

Office: + 966 (0)3 589 9574

Email: nsheikh@kfu.edu.sa; nss.kfu@gmail.com

URL: <https://sites.google.com/site/nsadiqs>



Education

- | | |
|-------------|---|
| April 2008 | Doctor of Philosophy in Chemistry
<i>University of Southampton, Southampton, United Kingdom</i> |
| March 2002 | Master of Science in Chemistry
<i>University of the Punjab, Lahore, Pakistan</i> |
| August 1999 | Bachelor of Science in Chemistry
<i>Government College University, Lahore, Pakistan</i> |

Professional Appointments

- | | |
|---------------------|---|
| Sep 2011 – present | Assistant Professor of Organic Chemistry
<i>King Faisal University, Al-Hafouf, Saudi Arabia</i> |
| Mar 2008 – Jun 2011 | EPSRC Postdoctoral Research Fellow
<i>University of Sheffield, Sheffield, United Kingdom</i> |
| May 2002 – Sep 2004 | Research Chemist
<i>Packages LTD., Lahore, Pakistan</i> |

Awards and Honours

- 2010 Wiley-VCH Best Poster Presentation Award at 9th ISCC in Florence, Italy
- 2008 Engineering and Physical Sciences Research Council (EPSRC) Postdoctoral Fellowship
- 2004 Overseas Research Scholarship awarded by the Universities UK, United Kingdom
- 2001 Merit Scholarship Award by the Government of Punjab, Pakistan
- 1999 Academic Roll of Honour & Gold Medal awarded by Govt. College University, Pakistan

Teaching Areas

Conceptual Chemistry
Stereochemistry
Organometallics
Rearrangements
Protecting Groups
Heterocycles

Medicinal Chemistry
Spectroscopy
Stereoelectronics
Pericyclic Reactions
Asymmetric Synthesis
Aromatics

Sustainable Chemistry
Reaction Mechanism
Retrosynthetic Analysis
Redox Reactions
Radical Chemistry
Catalysis

Research Experience

Sep 2011 – present	Independent Research Career <i>King Faisal University, Al-Hafouf, Saudi Arabia</i>
Jun 2012 – Aug 2012	Academic Visitor <i>University of Southampton, Southampton, United Kingdom</i> {Advisor: Prof. Richard C. D. Brown}
Mar 2008 – Jun 2011	EPSRC Postdoctoral Research Fellow <i>University of Sheffield, Sheffield, United Kingdom</i> {Advisor: Prof. Iain Coldham}
Oct 2004 – Sep 2007	PhD Scholar <i>University of Southampton, Southampton, United Kingdom</i> {Supervisor: Prof. Richard C. D. Brown}
Feb 2001 – Jan 2002	Postgraduate Research Scholar <i>University of the Punjab, Lahore, Pakistan</i> {Supervisor: Prof. Ishtiaq Hussain}

Research Fields

Synthetic organic chemistry, Catalysis, Medicinal chemistry, Agricultural science, Sustainable chemistry

- Applications of organometallic species in a concise enantioselective synthesis of bioactive heterocycles of medicinal and agricultural importance
- Development of chiral auxiliaries from commercially available natural building blocks and by using enzymatic resolution for an asymmetric catalysis leading to interesting and potent synthetic targets
- Biomass recovery from solid wastes using enzymatic catalysis and chemical processes
- Synthetic utility of click chemistry to access libraries of biologically active compounds and their bioassay to establish the structure activity relationship (SAR), resulting into novel drug candidates
- Designing synthetic strategy based on an acid catalyzed oxidation cyclization of dienes and trienes towards the preparation of cytotoxic tetrahydrofurans and tetrahydropyrans

Research Projects

- Synthesis of novel bioactive thiophenones and their application in plant protection and health impacts (Deanship of Scientific Research, King Faisal University, SR 83,400)

Currently Active Collaborations

- Prof. Richard C. D. Brown (Synthetic Organic Chemistry) University of Southampton, UK
- Prof. Iain Coldham (Physical Organic Chemistry) University of Sheffield, UK
- Dr. Jozef Stec (Pharmaceutical Sciences) Chicago State University, US
- Dr. Sherif Fouda (Agricultural Science) Qassim University, Saudi Arabia

Reviewing Activity

Organic & Biomolecular Chemistry (OBC)

Publications

1. An Experimental and In Situ IR Spectroscopic Study of the Lithiation–Substitution of *N*-Boc 2-phenylpyrrolidine and piperidine: Controlling the Formation of Quaternary Stereocenters

Sheikh, N. S.; Leonori, D.; Barker, G.; Firth, J. D.; Campos, K. R.; Meijer, A.; O'Brien, P.; Coldham, I. *J. Am. Chem. Soc.*, **2012**, *134*, 5300–5308.
2. Enantioselective Formal Synthesis of Eurylene: Synthesis of the *cis*- and *trans*- THF Fragments Using Oxidative Cyclization

Sheikh, N. S.; Bataille, C. J.; Luker, T. J.; Brown, R. C. D. *Org. Lett.* **2010**, *12*, 2468–2471.
3. Dynamic Thermodynamic Resolution of Lithiated *N*-Boc-*N*'-alkylpiperazines

Robinson, S. P.; Sheikh, N. S.; Baxter, C. A.; Coldham, I. *Tetrahedron Lett.* **2010**, *51*, 3642–3644.
4. Asymmetric Substitutions of 2-Lithiated *N*-Boc-piperidine and *N*-Boc-azepine by Dynamic Resolution

Coldham, I.; Raimbault, S.; Whittaker, D. T. E.; Chovatia, P. T.; Patel, J. J.; Leonori, D.; Sheikh, N. S., *Chem. Eur. J.* **2010**, *16*, 4082–4090.
5. Dynamic Resolutions of Chiral Organolithiums

Coldham, I.; Sheikh, N. S., Chapt. 7 in Stereochemical Aspects of Organolithium Compounds, (Ed. R. E. Gawley), in *Topics in Stereochemistry*, Helvetica Chimica Acta, Zurich, **2010**, Vol. 26, pp 253–293 (Book chapter)
6. Dynamic Resolution of *N*-Boc-2-lithiopiperidine

Coldham, I.; Raimbault, S.; Chovatia, P. T.; Patel, J. J.; Leonori, D.; Sheikh, N. S.; Whittaker, D. T. E., *Chem. Commun.* **2008**, 4174–4176.