

Niveen M. Khashab

*Assistant Professor of Chemical Sciences and Engineering, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia 23955-6900
niveen.khashab@kaust.edu.sa*

PROFESSIONAL PREPARATION

UNIVERSITY OF FLORIDA (UF), Gainesville, FL, USA

Ph.D., Chemistry December 2006

Medicinal Chemistry (minor) June 2006

AMERICAN UNIVERSITY OF BEIRUT, Beirut, Lebanon

B.S., Chemistry June 2002

APPOINTMENTS

Assistant Professor of Chemical Sciences and Engineering June 2009 – Present

King Abdallah University of Science and Technology (KAUST), Thuwal, KSA

Research Associate April 2007 – May 2009

- Northwestern University, *Department of Chemistry*
- University of California, Los Angeles, *Department of Chemistry and Biochemistry*
- Advisor: Professor J Fraser Stoddart

PROFESSIONAL EXPERIENCE

Head Graduate Student Instructor:

Organic Chemistry UF, January – December 2006

Chemistry of Biological Systems (Biochemistry) UF, January – December 2005

Collaborate Research Scientist:

L'Oreal, Paris, France August – December 2003-2006

- Designed and synthesized a library of bioactive compounds that were later tested at *L'Oreal*, Paris

Group Leader:

UF, Gainesville, USA August – December 2003-2006

AWARDS & HONORS

Crow Award for Chemistry Creativity (UF Campus-Wide) 2005

Teaching Effectiveness Award (UF Campus-Wide) 2004

Teaching Effectiveness Award (UF Campus-Wide) 2005

PUBLICATIONS

21. Ambrogio, M.; Pecorelli, T.; Patel, K.; **Khashab, N. M.**; Trabolsi, A.; Khatib, H.; Botros, Y.; Zink, J. I.; Stoddart, J. F. "Snaptop Containers" *Organic Letters* **2010**, *12*, 3304-330
20. Klichko, Y.; **Khashab, N. M.**, Patel, K.; Yang, Y. -W.; Stoddart, J. F.; Zink, J. I. "Improving pore exposure in mesoporous silica films for mechanized control of the pores" *Microporous and Mesoporous Materials* **2010**, *123*, 435-441.
19. Trabolsi, A; **Khashab, N. M.** Harebach, A. C.; Friedman, D. C.; Colvin, M. T. " Radically enhanced molecular recognition" *Nature Chemistry* **2010**, *2*, 42-49.
18. Trabolsi, A; Fahrenbach, A. C.; Dey, S. K.; Share, A. I.; Friedman, D. C.; Basu, S.; Gasa, T. B.; **Khashab, N. M.**; Saha, S.; Aprahamian, I.; Khatib, H. A.; Flood A. H.; Stoddart, J. F. *Chem. Comm.* **2010**, *46*, 871-873.
17. **Khashab, N. M** et al "Mechanised nanoparticles for drug delivery" *Nanoscale* **2009**, *1*, 16-39. **Most viewed article** on Nanoscale; Voted one of the **Hot Articles** of the year on the Royal Chemical Society website.
16. **Khashab, N. M.**; Belowich, M; Trabolsi, A; Friedman, F.; Lau, Y.; Khatib, H.; Stoddart, J. F.; Zink, J. I. "pH Responsive Nanoparticles gated by semirotaxanes" *Chem. Comm.* **2009**, *36*, 5371-5373.
15. Angelos, A; Yang, Y. -W., **Khashab, N. M.**; Stoddart, J. F.; Zink, J. I. "Dual-Controlled Nanoparticles Exhibiting Logic" *J. Am. Chem. Soc* **2009**, *131*, 11344-11346.
14. Angelos, A; **Khashab, N. M.**; Yang, Y. -W.; Trabolsi, A.; Khatib, H.; Stoddart, J. F.; Zink, J. I. "pH Clock-Operated Mechanized Nanoparticles" *J. Am. Chem. Soc.* **2009**, *131*, 12912-12914.
13. **Khashab, N. M.**; Trabolsi, T.; Lau, Y.; Ambrogio, A.; Friedman, F.; Khatib, H.; Zink, J. I.; Stoddart, J. F. "Redox and pH controlled Mechanized Nanoparticles." *Eur. J. Org. Chem.* **2009**, *11*, 1669-1673. (*Highlighted in Angewandte Chemie* **2009**, *48(18)*)
12. Ferris, D.; Zhao, Y. L. **Khashab, N. M.**; Zhao, Y. L. ; Stoddart, J. F.; Zink, J. I. "Light Operational Nanomachines." *J. Am. Chem. Soc* **2009**, *131*, 1686-1688.
11. Trabolsi, A; Hemadeh, M.; **Khashab, N. M.**, Friedmen D.; Elhabiri, M.; Belowich, M; Humbert, N.; Albrecht-Gary, A-M.; Stoddart, J. F. "Redox-Driven Molecular Machines Based on Inter- and Intramolecular Motion." *The New Journal of Chemistry* **2009**, *33*, 254-263.
10. Yoshioka, M.; Narindoshvili, T.; Chung, A.; **Khashab, N. M.**; Katritzky, A. R., "N-Fmoc-Protected(-Dipeptidoyl)Benzotriazoles for Efficient Solid-Phase Peptide Synthesis by Segment Condensation." *Chem. Biol. Drug Des.* **2008**, *72*, 182-187.
9. **Khashab, N. M.**; Katritzky, A. R. "Imidoylation Reactions at Carbon."(Review) *Arkive Org. Chem.* **2008**, *4*, 16-25.
8. **Khashab, N. M.**; Yoshioka, M.; Johnson, J.; Wilson, K.; Haase, D.; Katritzky, A. R. "Solid Phase Peptide Synthesis Utilizing Aminoacylbenzo-triazoles." *Chem. Biol. Drug Des.* **2008**, *70*, 465-468.
7. **Khashab, N. M.**; Haase, D.; Yoshioka, M.; Katritzky, A. R. "C-Amino- and C-Hydroxyimidoylation of Ketones, Esters, and Sulfones." *J.Org .Chem* **2007**, *72*,6742-6748.

6. **Khashab, N. M.**; Singh, A.; Katritzky, A. R. "C-Imidoylation of Esters, Sulfones, Sulfoxides, Amides and Nitro Compounds." *Arkive of Org. Chem.* **2007**, *5*, 263–276.
5. **Khashab, N. M.**; Gromova, A.; Katritzky, A. R. "Preparations of Substituted Thiosemicarbazides and N-Hydroxythioureas." *Arkive of Org. Chem.* **2006**, *3*, 226–236.
4. **Khashab, N. M.**; Kirichenko, N.; Singh, A.; Katritzky, A. R., "Microwave Assisted Synthesis of Amidrazones and Amidoximes." *J.Org .Chem* **2006**, *71*, 9051–9056.
3. **Khashab, N. M.**; Bobrov, S.; Yoshioka, M. ;Katritzky, A. R., "Synthesis of Mono- and Symmetrical Di-N-Hydroxy and Aminoguanidines." *J.Org .Chem* **2006**, *71*, 6753–6758.
2. **Khashab, N. M.**; Bobrov, S.; Katritzky, A. R., "An Efficient Method for the Preparation of Trisubstituted Guanidines." *Helv. Chim. Acta.* **2005**, *88*, 1664–1675.
1. Bobrov, S.; **Khashab, N. M.**; Katritzky, A. R., "Benzotriazolyl-Mediated 1,2 Shifts of Electron-Rich Heterocycles." *J.Org .Chem.* **2004**, *69*, 4269- 4271.

ABSTRACTS OF CONFERENCE PRESENTATIONS

Approximately twenty abstracts and preprints since 2003, full list available upon request.

PATENTS

1. Provisional patent on a controlled drug delivery system, filed at UCLA, **January 2008**.