

## Ammar TIGHEZZA

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- **Summary**

Highly experienced in teaching general chemistry and most of the physical chemistry topics. Very familiar with modern techniques of teaching. Very experienced in Blackboard e-learning platform software package. Mastering smart boards, data projection with internet access and video conferencing facilities. Extensive computer training, including use of MS Office package, Visual Basic and knowledge of many chemistry software packages. Enthusiastic and committed in team work.

- **Education**

- ✓ 1989 : *Doctorate* (PhD) in Spectrochemistry, Université des Sciences et Technologies de Lille, Lille, France.
- ✓ 1985 : *D.E.A.* (Master) in Spectrochemistry, Université des Sciences et Technologies de Lille, Lille, France.
- ✓ 1984 : *D.E.S.* (Bachelor) in Physical Chemistry, Batna University, Batna, Algeria.

- **Career history**

- ✓ 2000 to now : Associate Professor, King Saud University, Riyadh, KSA.
  - Teaching general chemistry in undergraduate classes.
  - Teaching chemical kinetics in undergraduate and graduate classes.
  - Teaching thermodynamics and physical chemistry in undergraduate and graduate classes.
  - Coordinator of the physical chemistry group for more than one year.
  - Coordinator of the department E-learning committee.
  - Member of the college E-learning committee.
  - Member of the comprehensive exam committee.
  - Member of the department quality committee.

- ✓ 1996 - 2000 : Associate Professor, El Arbi ben Mhidi University, Oum El Bouaghi, Algeria.
  - Teaching general chemistry in undergraduate classes.
  - Teaching chemical kinetics in undergraduate and graduate classes.
  - Teaching spectroscopic techniques in undergraduate classes.
  - Head of chemistry department for one year.
- ✓ 1994 – 1996 : Assistant Professor, 7th April University, Zawiya, Lybia.
  - Teaching general chemistry in undergraduate classes.
  - Teaching physical chemistry in undergraduate classes.
- ✓ 1988-1994 : Assistant Professor, Mohamed Khidher University, Biskra, Algeria.
  - Teaching general chemistry in undergraduate classes.
  - Head of the technologic foundation department for more than three years.

- **Interests and activities**

- ✓ Chemical Kinetics Modeling and Simulation.
- ✓ Non linear Chemical Kinetic.
- ✓ Chemical Kinetic Software development.
- ✓ Environmental Catalysis and Simulation.
- ✓ E-learning and distance learning by simulation and other interactive means.
- ✓ Use of Computer as tool of teaching chemistry.

- **Books**

- ✓ Translated to Arabic the book titled "Oscillations, Waves, and Chaos in Chemical Kinetics", written by Stephen Scott in the Oxford Chemistry Primers.
- ✓ Preparing a book on using MS Excel spreadsheets in solving Chemical Kinetics problems.

- **Supervised theses (Main supervisor)**

- ✓ Supervised to completion One **PhD** student:

“Isomerization of n-hexane over Ni-WO<sub>x</sub>/SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts”, 2003.

- ✓ Supervised to completion two **Master** students:
  - “Elaboration of chemical kinetics simulation software based on Net-Event Monte Carlo method”, 2005.
  - “Comparison of direct and indirect methods for the numerical solution of differential equations in chemical kinetics simulations”, 2012.
- ✓ Currently supervising two **Master** students:
  - “Improvement of stochastic simulation of chemical reactions by combining “sorting direct” and net-event methods”
  - “Combining simulation to nonlinear fitting for the determination of rate constants of elementary reactions by using Excel spreadsheets”
- ✓ Supervised many final bachelor projects.

- **Theses discussion**

- ✓ PhD: “Radiation-induced decomposition of some halogenated organic compounds in aqueous solutions”, 2007.
- ✓ Master:
  - “Solvent effect on the kinetics and mechanism of N-Mannich base of 3hydrazonoindole-2-one and alkaline hydrolysis of 1-benzylindoline-2-3-dione”, 2011.
  - “Synthesis and characterization of some polyamidenanocomposites”, 2011.
  - “Medium effect on the amine-catalyzed reaction of reaction of azlactone in water-ethanol mixtures”, 2011.
  - “Esterification of some organic acids using the pervaporation technique”, 2011.
  - “Synthesis of methacrylic ester monomers from methacrylate alcohol monomers by esterification reaction assisted by pervaporation technique”, 2012.

- **Conferences organization**

I have contributed to the organization of the

- ✓ National Conference in Chemistry joined to the 26th Meeting of the Higher Council of the Arab Union of Chemists in Makkah, Saudi Arabia, 2007.
- ✓ International Conference on Chemistry and Industry, Future Trends for the Third Millennium, Riyadh, Saudi Arabia, 2004.

- **Other experience**

- ✓ Trainer for Saudi teams participating in International Chemistry Olympiads (IChO).
- ✓ Member of the Saudi Chemical Society Council from 1994 to 1997.
- ✓ Member of the Saudi Chemical Society from 2000 to now.
- ✓ Member of committee of organization of conferences and seminars.
- ✓ President of the chemistry club of the university for one year.
- ✓ Member of many Scientific Council.
- ✓ Reviewer for the Saudi Chemical Society Journal
- ✓ Reviewer for the Arabian Journal of Chemistry.

- **Publications & communications**

- ✓ "Improvement of stochastic simulation of (bio) chemical reactions by combining "sorting direct" and "net-event" methods" to be submitted soon.
- ✓ "Combining simulation to nonlinear fitting for the determination of rate constants of elementary reactions by using Excel spreadsheets", Ammar M. Tighezza, Daifallah M. Aldhayan, and Nouir A. Aldawsari , Malaysian Journal of Fundamental & Applied Sciences, 2012, 8(5), 271-275.
- ✓ "Implementation of Net-Event Monte Carlo algorithm in chemical kinetics simulation software of complex isothermal reacting systems", Ammar Tighezza, Daifallah Aldhayan and Abdullah Almtahar, Journal of Saudi Chemical Society, 2011, 15(4), 351-355.
- ✓ "Isomerization of n-hexane over Ni-WO<sub>x</sub>/SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts." Y. Rezgui, M. Guemini, A. Tighezza and A. Bouchemma Canadian Journal of Chemical Engineering , 2004, 82(1), 184-189.
- ✓ "The Monte Carlo method: a good alternative to numerical methods of integration for the simulation of chemical kinetics." Asian Journal of Chemistry, (2004) Volume 16,

- ✓ "Isomerization of n-heptane over Ni-WO<sub>x</sub>/SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts. Effect of operating conditions , nickel and tungsten loading." Y. Rezgui, M. Guemini, A. Tighezza and A. Bouchemma Catalysis Letters 2003,87, 11-24
- ✓ "New software for simulation of chemical kinetic mechanism", A. Tighezza, Second International Conference on Chemistry and Its Applications, 2003, Doha, Qatar.
- ✓ "Etude cinétique de la réaction des atomes d'hydrogène avec l'isobutane", A. Tighezza , B. Meriaux and J.P. Sawerysyn Journal de chimie physique, 1990, 87, 67- 92.
- ✓ "Etude cinétique de la réaction des atomes de chlore avec le méthane " A. Tighezza , B. Meriaux and J.P. Sawerysyn Journal de chimie physique, 1987, 84(10), 1187-1193
- ✓ "Improvement of stochastic simulation of chemical reactions by combining "sorting direct" and "net-event" methods", to be submitted soon.

#### • References

- ✓ Professor Mutasim Ibrahim Khalil, King Saud University, Riyadh, Saudi Arabia, (mkhalil@ksu.edu.sa)
- ✓ Professor Salah Rhouati, Mentouri University, Constantine, Algeria, (salahrhouati@yahoo.com)
- ✓ Professor Jean Pierre Sawerysyn, Universite des Sciences et Technologies de Lille, Lille, France, ( Jean-Pierre.Sawerysyn@univ-lille1.fr)
- ✓ Dr Yahia Lemmouchi, R&D project manager, Southampton, United Kingdom, (yahia\_lemmouchi@yahoo.com)