

Curriculum Vitae of Majdi Hochlaf

Distinguished Professor of Molecular Physics and of Physical and Theoretical Chemistry

❖ Education

- 05/2003** Habilitation (HDR) on Spectroscopy and Dynamics of Small Molecular Systems, U. Paris-Est Marne-La-Vallée, France
- 09/1994-12/1997** PhD on Molecular Doubly Charged Positive Ions: Experimental and Theoretical Investigations, U. Pierre Marie Curie, France
- 02/1993-06/1994** Master on Quantum Physics, Ecole Normale Supérieure and U. Pierre Marie Curie, Paris, France
- 09/1992-08/1996** Elève at Ecole Normale Supérieure, Paris, France

❖ Current Positions

- 06/2022-** Member of the Management Committee of the European Community COST Action CA20129 “MultiChem - Multiscale Irradiation and Chemistry Driven Processes and Related Technologies”
- 10/2020-** Member of the Conseil Académique of U. Gustave Eiffel, France
- 10/2020-** Member of the Commission Carrière Enseignant-Chercheur of U. Gustave Eiffel, France
- 10/2019-** Member of the Management Committee of the European Community COST Action CA18212 “MD-GAS - Molecular Dynamics in the GAS phase”
- 11/2018-** Member of the Management Committee of the European Community COST Action CA17120 “CBRIO - Chemobrionics”
- 09/2017-** Distinguished Professor of Physical and Theoretical Chemistry, U. Gustave Eiffel, France
- 04/2013-** Head of Department of Physical, Chemical and Mechanical Sciences, IFSA, U. Gustave Eiffel, France

❖ Teaching Activities

- 09/2008-** Professor of Molecular Physics and Physical and Theoretical Chemistry, U. Gustave Eiffel, France
- 01/2013-12/2017** Examiner of Chemistry, Ecole des Mines de Paris, France
- 01/2002-12/2012** Examiner of Chemistry, Ecole Polytechnique, France
- 09/1998-08/2008** Assistant Professor – Chemistry, U. Paris-Est Marne-la-Vallée, Paris, France
- 09/1994-08/1998** Allocataire Moniteur Normalien, U. Marne-la-Vallée, Paris, France

❖ Fellowships and Awards

- 2008** Tunisian Elites laureate of the Tunisian Ministry for High Education and Research
- 2005** Tunisian Elites laureate of the Tunisian Ministry for High Education and Research
- 2005** QSCP X Promising Scientist Prize of CMOA
- 1992-1996** Scholarship, Department of Chemistry, Ecole Normale Supérieure, Paris, France

❖ Organisation of Scientific Meetings

Organisation of more than 30 national, international workshops, conferences and schools. The full list includes

- 2021** Chair of CECAM workshop «Benchmarking of electronic structure methods for non-covalent interactions» (8th – 10th November 2021. 35 participants, Champs sur Marne, France)
- 2019** Chair of French celebration of the 50th Anniversary of CECAM conference (8th April 2019. 65 participants, Orsay, France)
- 2019** Co-chair of CECAM tutorial «From quantum to classical molecular dynamics» (20th-24th May 2019. 40 participants, Saclay, France)

- 2019** Co-Chair and SOC member of International Conference MOLIM 2019 «4th MOLIM General meeting» (27th February-1st March 2019, 50 participants, Bologna, Italy)
- 2018** Chair of Faraday Discussions 296 Meeting «Quantum effects in small molecular systems: Faraday Discussion» (10th-12th September 2018, Edinburgh, United Kingdom, 65 participants).
- 2018** Co-organiser and SOC Chair of International Conference AMOC 2018 «Anharmonicity in medium-sized molecules and clusters» (16th-19th April 2018. 80 participants, Budapest, Hungary)
- 2018** Co-organiser and SOC member of International Conference MOLIM 2018 «3rd MOLIM General meeting» (19th-21th April 2018, 60 participants, Budapest, Hungary)
- 2017** Co-organisateur and SOC member of International Workshop on «Quantum Dynamics» (18th-20th November 2017, 80 participants. Sousse, Tunisia)
- 2017** Co-organiser of International MOLIM 3rd Training School «New avenues in molecular theories: From the lab to beyond the Earth» (31st August-6th September 2017, 60 participants, Belgrade, Serbia)
- 2017** Co-organiser of International MOLIM 2nd Training School «Advanced technics for molecular spectroscopy and dynamics» (6th-10th March 2017, 60 participants, Orsay, France)
- 2016** Co-chair of International Workshop «Investigations of biomolecular systems: Interplay between theory and experiment» (25th-26th November 2016, 90 participants, Sousse, Tunisia)
- 2016** Co-organiser of International Conference MOLIM 2016 «2nd MOLIM General meeting» (10th-12th October 2016, 75 participants, Dubrovnik, Croatia)
- 2016** Chair of the conference in the honor of Prof. Joseph Fransisco «Atmospheric Chemistry» (11th July 2016. 25 participants, Champs, France)
- 2016** Co-organiser and SOC member of thematic school on « Simulations Quantiques et Applications SQA 2016» (26th-29th May 2016. 50 participants, Tlemcen, Algeria)
- 2015** Co-chair of CECAM tutorial « Quantum dynamics in molecular systems: theory, modelling, simulation » (9th-12th November 2015. 50 participants, Orsay, France)
- 2015** Co-organiser and SOC Chair of International Conference AMOC 2015 «Anharmonicity in medium-sized molecules and clusters» (26th-30th April 2015. 150 participants, Madrid, Spain)
- 2015** Chair of International Conference MOLIM 2015 «1st MOLIM General Meeting » (27th-29th August 2015. 115 participants, Paris, France)
- 2014** Co-organisateur and SOC member of International Workshop on «Dynamique Moléculaire» (21st-23rd November 2014, 80 participants. Sousse, Tunisia)
- 2014** Co-organiser and SOC member of «International summer school on quantum electronic calculations, theoretical methods for microscopic dynamical studies. CAPZEO 2014» (9rd-12th June 2014. 80 participants, Rabat, Morocco)
- 2013** Co-organisateur and SOC member of International Workshop on «DFT : méthodologies et applications» (26th-27th October 2013, 80 participants. Sousse, Tunisia)
- 2013** Chair of International Conference «International Symposium on CO₂ Capture: Microscopic Studies and Applications» (18th-20th September 2013. 70 participants, Paris, France)
- 2013** Chair of the conference in the honor of Prof. Kirk Peterson «Accurate theoretical spectroscopy: state-of-the-art and further developments» (4th July 2013. 20 participants, Champs, France)
- 2013** Co-organisateur and SOC member of 4^{ème} école de physique moléculaire (2nd-4th April 2013, 60 participants. Tunis, Tunisia)
- 2012** Co-organisateur and SOC member of 1^{ère} école de Corrosion : Etude expérimentale et Approche Quantique (C2EAQ2012) (19th-21st December 2012. 150 participants, Fez, Morocco)
- 2012** Co-organisateur and SOC member of 3rd International Symposium of Theoretical Chemistry (3rd ISTC 12) (14th-17th October 2012. 150 participants, USTHB, Alger, Algeria)
- 2012** Co-organisateur and SOC member of 4th International Conference on «Modélisation Quantique et Nanomatériaux» (15th-16th September 2012. 90 participants, Tunis, Tunisia)
- 2012** Chair of International Conference AMOC 2012 «Anharmonicity in medium-sized molecules and clusters» (18th-21th April 2012. 120 participants, Paris, France).
- 2011** Co-organisateur and SOC member of 3rd International Conference on «Modélisation Quantique et Nanomatériaux» (12th July 2011. 90 participants, Tunis, Tunisia).

- 2011** Chair of Ile de France CECAM Workshop on «Spectroscopie rovibrationnelle : traitement de l'anharmonocité dans les systèmes moléculaires de moyennes taille et dans les agrégats» (7th of March 2011. 20 participants, U. Paris-Est Marne-la-Vallée, France)
- 2010** Co-organiser of International Conference PAMO JSM 2010 (29th June-2nd July 2010. 350 participants, Orsay, France)
- 2010** Co-organiser of thematic school «Journées de modélisation moléculaires: structure et réactivité moléculaires» (25th February-4th March 2010. 100 participants, Fez, Morocco)
- 2009** Co-organiser of the 3rd Ecole de Chimie Quantique (ECQR III) (3rd-6th June 2009. 70 participants, Rabat, Morocco)
- 2009** Co-organiser of International Workshop «Advanced workshop on theoretical and computational methods for molecular spectroscopy and collisions: Application to astrophysical and Atmospheric relevant systems » (7th-10th May 2009. 52 participants, Grenada, Spain)
- 2009** Co-organiser of thematic school «Journées de modélisation moléculaires: structure et réactivité moléculaires» (16th-20th April 2009. 100 participants, Fez, Morocco)
- 2008** Co-organiser of International Conference «Reactive and non-reactive collisions» (10th-13th April 2008. 80 participants, Tunis, Tunisia)

❖ **Supervision of Graduate Students and Post-Doctoral Fellows**

I (co-)supervised the following PhD students:

X. Qian, F. Richter, T. Zhang, J. Palaudoux, F. Khadri, B. Edhay, H. Ndôme, S. Marouani, V. Brites, A. Maatouk, K. Mathivon, S. Sabor, H. Hammami, M. A. Gannouni, Y. Ajili, Y. Tebai, N. Khemiri, S. Nasri, K. Mahjoubi, T. Trabelsi, A. Bellili, K Boussouf, R. Boulmène, A. Sanaa Zaag, T. Ayari, P. Kutudila, H. Othmani, Y. Makina, M. Cheraki, R. Dahmani, R. Hannachi, Z. Gouid, M. Alloui, H. Hendaoui, O. Sghaier, A. Badri, C. Gharbi, S. Baioui, B. Mehnen, S. Boucenina, A. Benabdalkarim, A.-E. Turchi, M. Ghamri.

Current Phd students (supervision and co-supervision):

K. Laamiri, S. Marzouk, M. Jerraya.

I (co-)supervised the following post-doctoral fellows:

Dr. J. Liu, Dr. A. Ben Houria, Dr. S. Ben Yaghlane, Dr. M. Nsangou, Dr. D. Hammoutène, Dr. O. Yazidi, Dr. A. Dhoub, Dr. M. Ben Messaouda, Dr. A. Mahjoub. Dr. M. Prakash, Dr. K. Mathivon, Dr. M. A. Gannouni, Dr. S. Mzali.

❖ **Editor and Guest Editor of Special Issues**

- 2022** Guest Editor of the Frontiers in Astronomy and Space Sciences research topic "Theoretical Characterization of Astrophysical Species". cf. <https://www.frontiersin.org/research-topics/14164/theoretical-characterization-ofastrophysical-species#articles>
- 2021** Guest Editor of the Journal of Physical Chemistry A Cheuk-Yiu Ng Festschrift Virtual Special Issue. cf. <https://pubs.acs.org/toc/jpcafh/125/34> and <https://pubs.acs.org/page/jpcafh/vsi/ng-festschrift>
- 2019** Guest Editor of Molecular Physics Special Issue on "Atoms, Molecules, and Clusters in Motion". cf. <https://www.tandfonline.com/toc/tmph20/117/13>.
- 2018** Guest Editor of Faraday Discussions Themed Collection on "Quantum effects in small molecular systems". cf. <https://pubs.rsc.org/en/journals/journalissues/fd#!issueid=fd018212&type=current&issnprint=1359-6640>.
- 2016** Guest Editor of Journal of Physical Chemistry A Virtual Issue on "Spectroscopy and Dynamics of Medium-Sized Molecules and Clusters: Theory, Experiment, and Applications". cf. <http://pubs.acs.org/page/jpcafh/vi/spectroscopy-and-dynamics.html>.
- 2013** Guest Editor of Physical Chemistry Chemical Physics Themed Issue on "Spectroscopy and dynamics of medium-sized molecules and clusters". cf. <http://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=cp&themeid=ede2c2bd-6f83-4455-9924-5978d91df041>.

❖ **Thématiques de recherche**

- Structure électronique de molécules dans leurs états électroniques fondamentaux et/ou électroniquement excités et de leurs interactions mutuelles
- Représentation analytique des surfaces de potentiel multi dimensionnelles et traitement des mouvements des noyaux
- Applications à la chimie atmosphérique, planétaire, à la chimie prébiotique et à la combustion
- Ions moléculaires multichargés
- Applications à l'étude des systèmes moléculaires d'intérêt biologiques
- Etude de molécules en interaction avec un substrat
- Machine learning et relation quantitative structure à activité

❖ **Publications (1996 -)**

Peer reviewed articles:	299 (>460 co-authors)
Invited and contributed talks:	91
Invited Seminars:	28
h-index:	28
URL for web site:	https://www.researchgate.net/profile/Majdi_Hochlaf
ORCID:	0000-0002-4737-7978
Subject area:	Molecular Physics, Theoretical and Computational Chemistry, Electronic, Structure Computations, Spectroscopies, Physics and Astronomy, Chemistry, Catalysis, Combustion, Earth and Planetary Sciences, Nanochemistry, Biochemistry, Medecinal Chemistry, Chemical Engineering, Computer Science

❖ **Journal covers highlights**



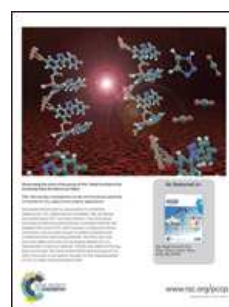
PCCP front cover: Phys. Chem. Chem. Phys. **12**, 15557 (2010).



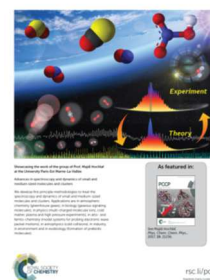
PCCP front cover: Phys. Chem. Chem. Phys. **15**, 9949 (2013).



JPCA front cover: J. Phys. Chem. A **120**, issue 4 (2016).



PCCP back cover: Phys. Chem. Chem. Phys. **18**, 30205 (2016).



PCCP back cover: Phys. Chem. Chem. Phys. **19**, 21236 (2017).



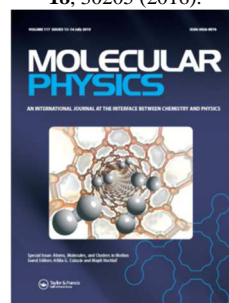
PCCP front cover: Phys. Chem. Chem. Phys. **19**, 8152 (2017).



PCCP front cover: Phys. Chem. Chem. Phys. **20**, 20756 (2018).



J. Phys. Org. Chem. front cover: J. Phys. Org. Chem. **31**, e3788 (2018).



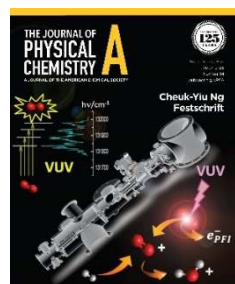
Mol. Phys. front cover: Mol. Phys. **117**, Issue 13 (2019).



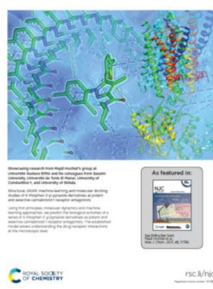
Phys. Chem. Chem. Phys. Inside front cover : Phys. Chem. Chem. Phys. **22**, 17052 (2020).



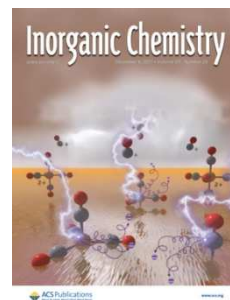
Chem. Commun. Inside front cover : Chem. Commun. **56**, 15525 (2020).



JPCA front cover: J. Phys. Chem. A **125**, issue 34 (2021).



New. J. Chem. back cover: New J. Chem. **45**, 17796 (2021).



Inorg. Chem. Front cover : Inorg. Chem. **60**, 17966 (2021).



Phys. Chem. Chem. Phys. front cover : Phys. Chem. Chem. Phys. **24**, 3523 (2022).

❖ Current Collaborations

Linguerr, Chambaud / Electronic structure computations / Marne-la-Vallée, France
 Poisson, Schwell, Garcia, Nahon / Electronic and Photoelectron spectroscopy / Paris and Saclay, France
 Steocklin, Lique / Quantum dynamics and spectroscopy / U. Bordeaux, U. Havre, France
 Calegari, Vrakking / Ultrafast spectroscopy / U. Hamburg, Max Born Institute, Germany
 Puzzarini / Rotational spectroscopy / U. Bologna, Italy
 Csaszar / Vibrational spectroscopy / U. Eotvos, Hungary
 Francisco / Biological signaling molecules / U. Pennsylvania, USA
 Ng, Jackson / VUV spectroscopy of small molecules / UC Davis, CA, USA
 M. Prakash / Ab initio CO₂ capture / SRM University, India
 K.C. Lau / Electronic structure computations of molecular systems / City U. Hong Kong, Hong Kong
 Mogren Al Mogren / Spectroscopy of clusters / King Saud U., Saudi Arabia
 Ajili, Ben Abd Allah, Ben Yaghlane, Jaidane / Non-reactive collisions / F. S. Tunis, Tunisia
 Feifel / Multi charged molecular ions / U. Gothenburg, Sweden