



Karine MOUGIN

Curriculum Vitae

Personal Information

Citizenship French
Birth date 27.03.1974
Birth Place Belfort, France
Languages French, English

Current Position

Since 2003 - Associate Professor at Institut de Science des Matériaux de Mulhouse (IS2M- CNRS) in Mulhouse, France, for the investigation of the synthesis and assisted assembly of Nanoparticles

Earlier Positions

2002-2003 Postdoctoral position at University of Virginia (UVA), Charlottesville, USA, with a NSF grant for the investigation of cell adhesion on engineered surfaces presenting a spatially varying gradient.

2001-2002 Temporary Assistant Professor (ATER) at Institut de Chimie des Surfaces et Interfaces (ICSI – CNRS), Mulhouse, France, for the investigation of self-assembly of nano-objects confined in a molecular self-assembled bi-layers : Elaboration of 2D organometallic nanocomposites.

Education

2016 Habilitation at Institut de Science des Matériaux de Mulhouse (IS2M - CNRS) and Université de Haute Alsace, Mulhouse (France).
From assembly of molecules and nanoparticles towards development of functional surfaces: Understanding mechanisms of structuration at nanoscale

2001 PhD graduation at Institut de Chimie des Surfaces et Interfaces (ICSI - CNRS) and Université de Haute Alsace, Mulhouse (France).
Nanoscale heterogeneous molecular surfaces: understanding and control of interface phenomena. Scale effects and cooperative properties

1998 Engineer in Chemistry at Ecole de Chimie de Mulhouse (ENSCMu) in Mulhouse (France).

*Institut de Science des Matériaux de Mulhouse
15 rue Jean Starcky, 68057 Mulhouse, France
☎ +33 389608778 ♦ ✉ karine.mougin@uha.fr*

Speciality : Formulation of polymers and colloids

1998 Master in Physical Chemistry of Surfaces and Interfaces at Université de Haute Alsace Mulhouse (France).

Research Interests

- Synthesis of metal nanoparticles
- Surface engineering by self-assembly of molecules
- Self-Assembly and Assembly assisted by AFM (nanomanipulation) of nanoparticles
- Friction at Nanoscale
- Rubber Composite

Teaching Experience

1998-2001 Assistant Lecturer at Faculté des Sciences et Techniques de Mulhouse, Université de Haute Alsace, Mulhouse (France).

Exercise on Solution Chemistry and Thermodynamics.

2001-2002 Temporary Lecturer at Faculté des Sciences et Techniques de Mulhouse, Université de Haute Alsace, Mulhouse (France).

Exercise on Atomistics, Solution Chemistry and Thermodynamics.

Main Collaborations

- Dr. Enrico GNECCO, Dr. R. Wannemacher, IMDEA Nanociencia, and Dr. C.PINA, Departamento de Cristalografía y Mineralogía, Universidad Complutense de Madrid, Madrid, SPAIN.
- Dr. Rynno LOHMUS, Institute of Physics, University of TARTU, ESTONIA.
- Dr. Delphine Faye, Centre National d'Etudes Spatiales (CNES), Toulouse, France.
- Dr. V. Vignal, Laboratoire Interdisciplinaire Carnot de Bourgogne (ICB), Dijon, FRANCE.
- Dr. A.BUCH, Ecole Centrale Paris (ECP), FRANCE.
- Dr. S. THANAWAN and Dr. T. AMORNSAKCHAI, Mahidol University, Bangkok, THAILAND.
- Dr. T.HAMIEH, MCEMA, Université libanaise, Beirut, LEBANON.

Projects/Grants

- Research Project R&T CNES : NanoTRAACES “ **Development of a reactivable analytical platform for the Nano-detection of Amino Acids**” : collaborative project between IS2M-ECP, ICB and CNES - 2014-2017
- Research Project R&T CNES N° 128725/00: “ **AMINANO**” in collaboration with Laboratory of process engineering at Ecole Centrale Paris - Chatenay-Malabry, Laboratoire Interdisciplinaire Carnot Bourgogne – Dijon- 2010-2013
- Research project PHC NanoEspagne 2013: “**Nanoparticles manipulation by Atomic Force Microscopy**”: collaboration between IS2M, France and IMDEA Nanociencia Madrid, SPAIN- 2013-2014.
- Research project PHC SIAM: “**Valorization of stabilized and recycled natural rubber (NR) and blends of NR/hydrogenated acrylonitrile butadiene rubber (HNBR) through**

their adhesive and frictional properties”: collaborative project between : Mahidol University, Kasetsart University , Bangkok , THAILAND and IS2M, ESPCI and Ecole Centrale Paris, FRANCE-2011-2013.

- Project FANAS : “NanopaRMA - **Nanoparticle Manipulation with Atomic Force Microscopy Techniques**” proposal number: 07-FANAS-OP-007 financed by ESF. Collaborative project between 8 European and one American partners : 2008-2012.
- University BQR project : “NanoMétO : Nanoparticules Métalliques Organisées par nanostructuration de films minces à la paroi” – Collaborative project between IS2M, Mulhouse France and Laboratoire Matériaux, Catalyse, Environnement et Méthodes Analytiques - MCEMA –Beyrouth Lebanon - 2010-2012.
- Partner of a European COST project: “**MP1303, Understanding and Controlling Nano and Mesoscale Friction**” 2014-2016.
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Doctoral Supervising

- Bilan
 - 1 post-doctoral student
 - 8 Ph-D students (4 students have defended)
 - 17 Master students
 - 11 undergraduate students

Honor Awards

Holder of a bonus for Scientific Excellence since 1st of October 2014

2012. Best Oral Communication Prize to Ph-d student Mohamad RAJAB under the supervision of Dr. K.MOUGIN, at the international conference “**Eighth International Conference on Materials Sciences (CSM8)**”- Beirut - **Lebanon 28-30 Mai 2012.**

Short term visits/Grants

From 03/04/2016 Visiting Scientist in the group of Dr. Enrico GNECCO and Dr. R. Wannemacher, IMDEA to 09/04/2015 Nanociencia, and Dr. C.PINA, Departamento de Cristalografía y Mineralogía, Universidad Complutense de Madrid, Madrid, SPAIN.

From 27/04/2015 Visiting Scientist in the group of Dr. Enrico GNECCO and Dr. R. Wannemacher, IMDEA to 02/05/2015 Nanociencia, and Dr. C.PINA, Departamento de Cristalografía y Mineralogía, Universidad Complutense de Madrid, Madrid, SPAIN.

From 19/09 to 20/09/2006 Visiting Scientist in the group of Prof. S.Valeri, M.Natali- Dipartimento di Fisica , Università di Modena e Reggio Emilia – ITALIA.

From 16/05 to 19/5/2004 Visiting Scientist in the group of Dr. M.Natali- Istituto di Chimica Inorganica e delle Superfici (ICIS-CNR), Padova – ITALIA.

From 22/05 to 04/6/2004 Visiting Scientist in the group of Dr. Sombat THANAWAN- Polymer Department, Mahidol University, Bangkok- THAILAND.

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☎ +33 389608778 ♦ ✉ karine.mougin@uha.fr

Invited Talks and Seminars

- “Development of green natural rubber composites: investigation of surface modification on adhesive and frictional properties” K. Mougín, N. Hariwongsanupab, T. Amornsakchai, S. Garreau, S. Thanawan, M-F. Vallat at 18th International Conference -School "Advanced materials and technologies" in Palanga, Lithuania, August 28-31, 2016.
- “Manipulation of gold functionalized nanoparticles on flat substrates using a high frequency transducer couples to AFM” K. Mougín, R. Weinnemacher, P. Pedraz, E. Gnecco, at Second International Workshop on Understanding and Controlling Nano and Mesoscale Friction, in Riga, Latvia, July 4-7, 2016.
- “Synthesis and assembly of colloidal gold nanoparticles : *correlation between nanoscale organization and detection of traces of molecules*” K. Mougín, Seminar at UNIVERSIDAD COMPLUTENSE de Madrid, Madrid – Spain, November 14th 2013.
- “Synthesis and assembly of colloidal gold nanoparticles : *investigation of scale effects and cooperative properties*” K. Mougín, Seminar at Physics Department in Tartu University, Tartu – Estonia, August 28th 2013.
- “NPs functionalization -Self-Assembly and Manipulation” , K.Mougín, H. Haidara, Naresuan University, Phitsanulok, Thailand, October 26th 2012.
- “Effect of chlorination of NR on frictional, adhesive and wetting properties” K. Mougín, S. Radabutra, M-F. Vallat, H.Haidara, S. Thanawan, R.Chollakup, W. Smitthipong, S. Klanarong, HRPP Workshop , Udon Thani – Thailand, October 23-25, 2012.
- “Modification des propriétés physicochimiques de surface liées à l’application d’un traitement de transformation de la fibre” K.Mougín, P.Kitzmann, H.Haidara, A. Galliano, L’Oréal Paris, France, October 16th 2012.
- " From confined nanobubbles and nanodroplets to self-assembly of gold nanoparticles in 2D nanorings arrays and their SERS properties" S. Darwich, K. Mougín, L. Vidal, J-C Valmalette, H. Haidara, Journées internationales de Plasmonique Moléculaire Porquerolles, France, October 1-3 2012.
- “NPs functionalization -Self-Assembly and Manipulation” K.Mougín, H. Haidara, Seminar at Physics Department in Tartu University, Tartu, Estonia, June 14th 2012.
- “NPs functionalization - Self-Assembly and Manipulation” K.Mougín, H. Haidara, Seminar in Phitsanulok, Thaïlande, Tartu – Estonia, June 14th 2012.
- " Effect of Relative Humidity when Manipulating Au NPs on Flat Substrates using Dynamic AFM" S. Darwich, K. Mougín, E. Gnecco, H. Hoelscher, H. Haidara, 3rd European Nanomanipulation Workshop Madrid – Spain , April 25-27, 2012.
- “Nanoscale friction on thin films, Effect of morphology, chemistry of the films and operating conditions”, K.Mougín, H. Haidara, Seminar at Institute of solid state Physics, University of Latvia, March 24th 2012.
- " Effect of Relative Humidity when Manipulating Au NPs on Flat Substrates using Dynamic AFM" S. Darwich, K. Mougín, E. Gnecco, H. Hoelscher, H. Haidara, 3rd International Workshop on Advanced Atomic Force Microscopy Techniques 2012 Karlsruhe – Germany , March 5-6, 2012.
- “Nanoscale friction on thin films, Effect of morphology, chemistry of the films and operating conditions”, K.Mougín, H. Haidara, Seminar Mahidol University, Salaya, Thailand, February 3rd 2012.
- " Nanofrictional investigation on NR films: Influence of the filler and cross-linker " K. Mougín, S. Radabutra, H. Haidara, Franco-Thai Workshop Bangkok – Thailand, February 1-3, 2012.

- “Manipulation of Au nanoparticles with atomic force microscopy in dynamic mode: Influence of particle–substrate chemistry and morphology and of operating conditions” [K.Mougin](#), S.Darwich, E.Gnecco, M. Evstigneev and H. Haidara, 2nd European Nanomanipulation Workshop, FANAS Conference, Tartu – Estonia, June 6-8, 2011.
- “Self-assembly and manipulation of bare and coated gold nanoparticles” [K.Mougin](#), S.Darwich, G.Chandrasekar, E.Gnecco , A.Rao and H. Haidara, CEA-Grenoble, July 2010.
- “Nanoscale Heterogeneous Molecular Surfaces: Understanding and Control of Interface Phenomena:Scale effects and Cooperative Properties” [K.Mougin](#), H. Haidara, Institute of Physics-Centech- University of Münster, Münster – Germany, January 29th 2010.
- “AFM-assisted Assembly of Gold Nanoparticles : Influence of Shape, Size and Coating” [K.Mougin](#), S.Darwich, G.Chandrasekar, E.Gnecco , A.Rao and H. Haidara, ICTP-FANAS Conference "Trends in nanotribology", Miramare, Trieste, Italy, October 19-24, 2009.
- “Assemblages et organisation de particules aux Interfaces -Vers l'élaboration de nano-structures fonctionnelles” [K. Mougin](#), L. Vonna, H. Haidara, Seminar, IPCMS, Strasbourg , France, December 15th 2007.
- “Synthesis of Gold Nanoparticles and Study of their Mobility and Organization under Thermal Activation” [K.Mougin](#), Z. Zheng, E.Gnecco , A.Rao and H. Haidara , Chemical Engineering Department, University of California- Santa Barbara, USA, June 26th 2007.
- “Synthesis of Gold Nanoparticles and Study of their Mobility and Organization under Thermal Activation” [K.Mougin](#), Z. Zheng, E.Gnecco , A.Rao, H. Haidara, Biological Sciences Department, University of Columbia, USA, June 22th 2007.
- “Morphological organisation and stability of nanoparticulate assemblies and coatings at model surfaces” [K.Mougin](#), Z. Zheng, E.Gnecco , A.Rao and H. Haidara, Young Researcher Workshop, Dresden, Germany, October 1-4, 2006.
- “Mobility and Organization of Gold Nanoparticles (thin metallic film and nanocolloids) under Thermal Activation” [K.Mougin](#), Z. Zheng, E.Gnecco , A.Rao, H. Haidara, CNR-INFM National Research Center S3, University of Modena and Reggio Emilia, Modena, Italy- September 18th 2006.
- “Nanoscale Friction and wetting at a representative ensemble of model surfaces with different polarity” [K. Mougin](#), H.Haidara, M.Schmitt, S. Bistac, Mahidol University, Thailand, June 1st 2004.
- “Nanofriction sur des Surfaces Nanostructurées” [K.Mougin](#), H.Haidara, M.Schmitt et S.Bistac-Brogly, Seminar CEFACOR, Paris, France, June, 4th 2004.

Other Experience

- Responsible of ASTEP: Accompagnement en sciences et technologie à l'école primaire at Faculty of Science , Université de Haute Alsace, Mulhouse, France.
- Responsible of the Licence Sciences Fondamentales et Appliquées at Faculty of Science – University of Haute Alsace, 2006-2011.

Workshops Organization- Member of the Organization committee

- “5th European Nanomanipulation Workshop” held in Mulhouse (France) in June 18-20, 2014.
- “4th European Nanomanipulation Workshop” held in Kraków (Poland) – June 12-14, 2013.
- “3rd Nanomanipulation Workshop” held in Madrid (Spain) - April 25-27, 2012.
- Organizer of the FIRST UNIBAS-UHA NANOTECH MEETING held in Mulhouse in June 9th 2009, France.

- “Eighth International Conference on Materials Sciences” (CSM8)- Beirut Lebanon Mai 28-30, 2012.
- “Seventh International Conference on Material Sciences” (CSM7) Beirut – Lebanon May 20 – 22, 2010 .

Expertise

- External referee of MS.c and Ph-D Thesis
- Referee for IOP, ACS, polymer Chemistry, Nanotechnology, Journal of Colloid and Interface Sciences
- Experts for ANR, ERC, Irish council for Irish Council for Science, Engineering and Technology (IRCSET), Archimedes Foundation - Aid for Research and Development in Materials Technology, Latvian Science Council .
- Member of a Scientific Council: ‘Estonian Nanotechnology Competence Centre (ENCC), Tartu Estonia.

Participation in Schools, Workshops and Conferences

- “Multiscale Investigation of the Physico-Chemical and Mechanical Properties of Hevea Brasiliensis Latex Stabilized by Ammonia the days following its harvest”
K. Mougín, P. Kunemann, C. Bottier, B. Gross, K. Wadeesirisak, S.Srisomboon, S.Jantarasunthorn, S.Liengprayoon, N.Musigamart, L.Vaysse, M.F.Vallat, The Third Asia Pacific Conference – APRC 2017, Surat Thani, Thailand November 15-1,6 2017
- “Stress transfer improvement of natural rubber/pineapple leaf fiber composites by surface modification of fiber” K. Mougín, N. Hariwongsanupab, T. Amornsakchai, S. Garreau, S. Thanawan, M-F. Vallat , The Third Asia Pacific Conference – APRC 2017, Surat Thani, Thailand November 15-1,6 2017
- “Stress transfer improvement of natural rubber/pineapple leaf fiber composites by surface modification of fiber” K. Mougín, N. Hariwongsanupab, T. Amornsakchai, S. Garreau, S. Thanawan, M-F. Vallat , HRPP 2017 Bangkok, Thailand, November 13-15, 2017
- “Optical and electrochemical activity of gold flower-like crystals” P. Bauer, K. Mougín, V. Vignal, A. Buch, P. Ponthiaux, D. Faye Congrès Société Chimique de France, Grand Est, Mulhouse, France, May 8-12, 2017
- “Stress transfer improvement of natural rubber/pineapple leaf fiber composites by surface modification of fiber” K. Mougín, N. Hariwongsanupab, T. Amornsakchai, S. Garreau, S. Thanawan, M-F. Vallat, IRC 2016 Kitakyushu, Japan, October 24-28 , 2016
- “NPs-Based Materials Assembly & Mobility of NPs” K. Mougín 1st Research meeting Regio Chimica Mulhouse, France, June 23, 2016
- "Influence of non-rubber components on NR surface modification by chlorination" *K. Mougín, M.F. Vallat, P. Kunemann, S. Radabutra, S. Thanawan, R. Chollakup, K. Rungsanthien, P. Suwanruji, K. Sriroth, W. Smitthipong, APRC 2015, Phuket-Thailand, October 15-16, 2015.*

- “Manipulation of gold nanoparticles using dynamic force microscopy with an ultrasonic system” K. Mougin, R. Weinnemacher, P. Pedraz, E. Gnecco, at 6th European Nanomanipulation Workshop in Giessen, Germany September 23-25, 2015.
- “Développement d’un capteur régénératif en micro- et nano-technologies pour la détection et la quantification de molécules organiques” P. Bauer, K. Mougin, A. Buch, P. Ponthiaux, D. Faye, V. Vignal, A. Krawiec, Toulouse- France, June 2, 2015.
- “ How Nanoparticles organization affects nanoscale properties: application to the detection of traces of molecules” K.Mougin, M.Rajab, S.Darwich, J-C. Valmalette, V. Vignal, H. Krawiec, L. Vidal, H. Haidara, *CIP1 - Premier Workshop 'Chimie Industrielle et Procédés', Hammamet, Tunisia, March 17-19, 2014.*
- “Synthesis and assembly of colloidal gold nanoparticles: correlation between nanoscale organization and detection of trace of molecules” K.Mougin, Nanotechnology Forum 2013, ENCC Workshop, Tartu, November 28th, 2013.
- “Control of the morphology and the organization of colloidal nanoparticles by template assisted method” M. Rajab, K. Mougin, V. Vignal, H. Krawiec, T. Hamieh, J. Toufaily, H. Haidara, *Atomic structure of nanosystems from first-principles simulations and microscopy experiment*, Helsinki, Finland - Stockholm, Sweden, June 4 – 6th, 2013.
- “Effect of non-rubber components on frictional properties of sulphur crosslinked natural rubbers” K. Mougin, R. Tantatherdtam, P. Ponthiaux, J-P. Celis, K. Rungsanthie, P. Suwanruji, R. Chollakup, K. Sriroth, S. Radabutra, S. Thanawan, M-F. Vallat, M. Nardin, *RubberCon2013*, Bangkok, Thailand, December 16-18, 2013.
- “Surface modification of NR by chlorination - Influence of non-rubber constituents”, K. Mougin, M.F. Vallat, S. Radabutra, S. Thanawan, R. Chollakup, K. Rungsanthien, P. Suwanruji, K. Sriroth, *JFP Grand Est- 13^e Journée Scientifique du GFP section Grand-Est*, Mulhouse, France, June 6th, 2013.
- “Manipulation of Au nanoparticles with Atomic Force Microscopy in dynamic Mode: Influence of particle-substrate chemistry and morphology, and of operating conditions” *Seminar dimension Fast-Scan*, Mulhouse, France, April 3-4, 2013.
- “Effect of chlorination of NR on frictional, adhesive and wetting properties” K. Mougin, S. Radabutra, M-F. Vallat, H. Haidara, S. Thanawan, R. Chollakup, W. Smitthipong, S. Klanarong, *The 4th Scientific Seminar and Scientific Committee of HRPP*, Centara Convention Centre, Udon Thani Thailand, October 30th – November 2nd, 2012.
- “Control of spontaneous spatial organization of gold nanoparticles using Cylindrical Domains of Block Copolymers” M. Rajab, K. Mougin, M. Derivaz, T. Hamieh, K. Hariri, J. Toufaily, H. Haidara, Eighth International Conference on Materials Sciences (CSM8), Beirut, Lebanon, Mai 28-30, 2012.
- “Effect of relative humidity when manipulating gold nanoparticles on flat substrates using dynamic atomic force microscopy” S. Darwich, K. Mougin, H. Haidara, *3rd Nanomanipulation Workshop*, Madrid, Spain, April 25-27, 2012.
- “Effect of relative humidity when manipulating gold nanoparticles on flat substrates using dynamic atomic force microscopy” S. Darwich, K. Mougin, H. Haidara, *3rd International Workshop on Advanced Atomic Force Microscopy Technique*, Karlsruhe, Germany, March 5-6, 2012.
- “Nanoscale friction on thin films, effect of morphology, Chemistry of the films and operating conditions” K.Mougin, H. Haidara, *Franco – Thai Symposium*, Bangkok, Thailand, February 1 - 3, 2012.

- “Modification des propriétés physicochimiques de surface liées à l’application d’un traitement de transformation de la fibre” K.mougin, P.Kitzmann, H.Haidara, A. Galliano, L’Oréal Paris, France, October, 16, 2012.
- “Effect of relative humidity when manipulating gold nanoparticles on flat substrates using dynamic atomic force microscopy” S. Darwich, K. Mougin, H.Haidara, *3rd International Workshop on Advanced Atomic Force Microscopy Technique, Joint ICTP-FANAS Conference on trends in Nanotribology*, Trieste, Italy, September 12-16, 2011.
- “Auto-assemblage des nanoparticules assisté par le mouillage et le séchage des nanofluides et des biopolymères” S. Darwich, K. Mougin, H.Haidara, *journée de l’école doctorale*, Mulhouse, France, Mai 26th, 2011.
- “Manipulation of Au nanoparticles with atomic force microscopy in dynamic mode: *Influence of particle–substrate chemistry and morphology, and of operating conditions*” K.Mougin, S.Darwich, E.Gnecco, M. Evstigneev and H. Haidara, *2nd European Nanomanipulation Workshop, FANAS Conference*, Tartu, Estonia, June 6-8, 2011.
- “Is it easy to manipulate self-assembled gold Nanoparticles?” K.Mougin, S.Darwich, E.Gnecco, A.Rao, H. Haidara, *1st European Nanomanipulation Workshop*, Cascais, Portugal May 17-19, 2010
- “Self-assembly and manipulation of bare and coated gold nanoparticles” K.Mougin, S.Darwich, G.Chandrasekar, E.Gnecco, A.Rao and H. Haidara, *CEA-Grenoble*, July 19th, 2010
- “Nanoscale Heterogeneous Molecular Surfaces: Understanding and Control of Interface Phenomena Scale effects and Cooperative Properties” *Loréal- DGIMC Hair Instrumental Evaluation Paris*, Paris, France, July 8th, 2010
- “General presentation of the main topics of two research groups : PMA and Structure and Phase Transition of the Physics Pole - Interface and Self-Assembly of LRC” *Réunion Transfrontalière entre physiciens UNIBAS-UHA*, Basel, January 20th, 2009.
- “Nanoscale heterogeneous surfaces: Applications to Biosensor” K.Mougin, *Understanding Adhesion: from Nature to man-made devices/ FANAS Conference*, Alberobello, Italy, May 10-11, 2010.
- “AFM-assisted Assembly of Gold Nanoparticles : *Influence of Shape, Size and Coating*” K.Mougin, S.Darwich, G.Chandrasekar, E.Gnecco, A.Rao, H. Haidara, *ICTP-FANAS Conference "Trends in Nanotribology"*, Miramare, Trieste, Italy, October 19-24, 2009.
- “AFM-assisted Assembly of Gold Nanoparticles : *Influence of Shape, Size and Coating*” K.Mougin, S.Darwich, G.Chandrasekar, E.Gnecco, A.Rao, H. Haidara, *EDINAM*, Dresden, September 28th-October 1st, 2009.
- “Assemblages et organisation de particules aux Interfaces -Vers l’élaboration de nano-structures fonctionnelles”K. Mougin, L. Vonna, H. Haidara, *Journée scientifique du pôle matériaux et Nanosciences Alsace*, Mulhouse, November 13th, 2007.
- “Mobility and Organization of gold Nanoparticles under Thermal Activation” K.Mougin, Z. Zheng, E.Gnecco, A.Rao, H. Haidara, *Rheology and Colloid Science Group Basel*, Basel, Switzerland, May 8th 2007.
- “Morphological organisation and stability of nanoparticulate assemblies and coatings at model surfaces” K.Mougin, Z. Zheng, E.Gnecco, A.Rao, H. Haidara, *Young Researcher Workshop*, Dresden, Germany, October 1-4, 2006.
- “Nanofriction sur des Surfaces Nanostructurées” K. Mougin, H. Haidara, M. Schmitt et S. Bistac-Brogly, Séminaire CEFACOR, Paris, France, Juin 4th, 2004.
- “Nanoscale Friction and wetting at a representative ensemble of model surfaces with different polarity” K. Mougin, H.Haidara, M.Schmitt and S. Bistac, Mahidol University, Thailand, June 1st, 2004.

- “Nanofriction on Organic nanopatterned Surfaces” K. Mougin, H.Haidara, M.Schmitt and S. Bistac University of Padova, Italy, May 18th, 2004.
- “Nanoscale friction and wetting at a representative ensemble of model surfaces” K. Mougin, H.Haidara, G.Castelein, *Mécanique-Physique des Surfaces de Polymères Solides: M-P Surface Polymère 2003*, Saint Germain au Mont d’Or, France, November 26-28, 2003.
- “Control of cell adhesion using engineered interfaces with spatially varying gradients” K. Mougin, M. B. Lawrence, E.J. Fernandez and A. C. Hillier, *AIChE*, San Francisco Hilton, CA, USA, November 16-21, 2003.
- “Nanoscale friction and wetting at a representative ensemble of model surfaces” K.Mougin, H.Haidara, G.Castelein, *ESF-Nanotribology Workshop*, Antalya, Turkey, October 20-23, 2003.
- “Nanoscale heterogeneous molecular surfaces : understanding and control of interface phenomena : Scale effects and cooperative properties” K.Mougin, H.Haidara, J.Schultz, *Seminar*, Chemical Engineering Department, University of Virginia, Charlottesville, VA, USA, October 2002.
- “Surfaces moléculaires hétérogènes et nanostructurées dans le contrôle et la compréhension des phénomènes d’interface : Forces intermoléculaires, effets d’échelle et de taille finie” K.Mougin, H.Haidara, J.Schultz, Séminaire, ICSI, Mulhouse, France, May 2001.
- “Surfaces moléculaires hétérogènes et nanostructurées dans le contrôle et la compréhension des phénomènes d’interface : effets d’échelle et de taille finie, propriétés coopératives ” K.Mougin, H.Haidara, J.Schultz, *Journée de la Société Française de Chimie*, Mulhouse, France, March 22nd 2001.

Book contribution

- H. Haidara, **K. Mougin**, **Dekker Encyclopedia of Nanoscience and Nanotechnology**, Eds., J. A. Schwarz, C. I. Contescu & K. Putyera (Marcel Dekker Inc., New York), p.761–772 (2004).
- **K.Mougin**, H.Haidara, “Nanoscale Friction of Self-Assembled Monolayers” **Springer Book-** chapter 28, 2006
- **K.Mougin**, “Specific challenges for nanomaterials engineering”, **GENNESYS’**, chapter 4, 2007

Publication List

- S.Oras, S.Vlassov, M. Berholts, R. Lohmus, **K. Mougin**, “Tuning adhesion forces between functionalized gold colloidal nanoparticles and silicon AFM tips: role of Ligands and capillary forces. “Beilstein J. Nanotechnol. 2018, 9, 660–670
- S. Karoui, R.Ben Arfi, **K. Mougin**, A. Ghorbal, “Adsorptive Removal of Cationic and Anionic Dyes from Aqueous Solution by Utilizing Reed Treated with Sodium Dodecyl Sulfate as a New Bioadsorbent”, *Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions*, Springer International Publishing, 2017, 189-193
- M.Rajab, T.Hamieh, A.Airoudj, **K.Mougin**, K.Hariri, W. Rammal, H.Mortada, M.Akil, A.Kassas, J.Toufaily, "Synthesis by ATRP of Polystyrene-b-Poly(4-vinylpyridine) and Characterization by Inverse Gas Chromatography" *Journal of Research Updates in Polymer Science*, 2017, 6, 76-89.

- R. Ben Arfi, S. Karoui, **K. Mougin**, A. Ghorbal, "Tunisian Almond Shell for Efficient Removal of Eriochrome Black T and Malachite Green Dyes from Aqueous Solution", Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions, Springer International Publishing, 2017,1383-1385
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