

**Dr. Brahim Aïssa,
B.Sc., M.Sc., Ph.D., SIGMA XI MEMBER.**

MATERIALS AND ENERGY SCIENCES.

Senior Scientist, QEERI, HBKU, Qatar Foundation

Associate Professor, HBKU, Qatar Foundation

P.O. Box 5825, Doha, Qatar.



***Distinctions and
Awards***

- Nominated and winner of the “Outstanding achievements award” from the Fondation Club Avenir, Montréal, Canada, Nov. 2015.
- Winner of the “Young Investigator Award”, QEERI-Qatar Foundation, Doha, May 2015.
- Winner of the “Exceptional performance award”, MPB technologies Inc. Montreal, Canada, Aug. 2014.
- Laureate of the prestigious “Networking/Partnering Initiative fellowship” from the European Space agency (NPI-ESA), Amsterdam, Netherland, May 2013. This fellowship has been awarded to 6 laureates over the world.
- Laureate of the “Australian Endeavour Research Fellowship”, from the Australian Government, Brisbane, Australia, Dec. 2013.
- Laureate of the “NSERC-Industrial Research and Development Fellowship” (R&D PDF). Ottawa, Canada, 2010-2012.
- Ph.D. work selected in the best TOP-10 scientific discovery in Quebec by the magazine Quebec Science (Jan. 2009, Quebec, Canada).
- Samples prototype saved at Canada Science & Technology Museum in Ottawa (2010, Ottawa, Canada).
- Top prize for the best Ph.D. achievement (2010, INRS-ÉMT, Quebec), Canada.
- Top prize for the best M.Sc. achievement (2005, INRS-ÉMT, Quebec), Canada.
- Winner of the 2009 “Research diffusion prize” from Natural Sciences and Engineering Research Council of Canada: (3200 CAD\$, May. 2009).
- Winner of the 2005 “Research diffusion prize” from Natural Sciences and Engineering Research Council of Canada: (3800 CAD\$, July 2005).
- Elected Senior-Fellow of the UNESCO-UNISA Chair in Nanoscience and nanotechnology (May 2015).
- Elected Fellow of the UNESCO-MATECSS chair in Materials and Technologies for Energy Conversion, Saving and Storage, Canada, Oct. 2015.
- Elected Senior-Fellow of the African Network in Nanoscience and Nanotechnology (NANOAFNET) (May 2015).
- FQRNT (Fonds Québécois de la Recherche sur la nature et les technologies) President’s Congratulations Letter for PhD achievements, 2009, Quebec, Canada.
- Australian Minister for Education Congratulations Letter for the Australian Endeavour Award. Dec. 2013.
- Nominated and elected member of the Royal Society of Chemistry (UK). 2015.
- Awarded a scholarship from Italian foreign office. (3900 Euros, Roma, Italy. Nov. 2007).
- Winner of the travel award, EMC’2009 conference. Pennsylvania, USA (June 2009).
- Student’s best presentation award, Colloque Plasma Québec. University of Montreal, Canada, May 2009.

- Student's best presentation award, International Society of Electrochemistry (ISE). Satellite Student Regional Symposium on Electrochemistry. McGill University, Montreal, Canada. July 2010.
- INRS scholarship for Ph.D. Program (9/2005-12/2009).
- INRS scholarship for Master's Program. (1/2004-8/2005).
- Ranked top first during the national exams for access to graduated studies (Algiers, 2000).
- Ranked top 3 for the best Engineer's project, University of Sciences and technology, Algiers, Algeria (Sept. 1998).
- Ranked top first during the national exams for access to graduated studies (Algiers, 2000).
- Patent selected twice among the world best technologies (WBT showcase'2008, Arlington, Texas, 26-27 March) and TechConnect Summit 2009 (Houston, Texas. May 2-9, 2009).
- Editor-in-chief of the smart materials and coatings technology Journal (Research-Publisher, CA, USA).
- Editor in Frontiers in materials (Nature Publishing Group), smart materials topic.
- Editor in Journal of Composites and Biodegradable Polymers.
- Editor in Journal of Environmental Science and Engineering Technology.
- Editor in Journal of New Technology and Materials JNTM.
- Editor: International journal of Nanotechnology and nanomedicine
- Elected BIT world congress member 2016/2017.
- Editor in Nano Research & Applications (IMedPub journals group, Dec. 2015).
- Nominated and elected full member of the Sigma Xi, the scientific research society (July 2012). Re-elected on November 2014.
- Associate Editor of Journal of Research Updates in Polymer Science.
- Appointed member of the technical committee IEEE-ICPRE 2016 conference, Shanghai, China.
- Appointed chairman of the advanced electronics session IEEE-ICPRE 2016 conference, Shanghai, China.
- Appointed Chairman of the UNESCO MATECSS' workshop, session: Functional Nanomaterials for energy applications. Montreal, Canada, July 2014.
- Appointed member of the technical committee ICPEES 2016 conference, Paris, France.
- Elected honorary member of IRDIndia society of science, April 2017.
- Member of the following societies of knowledge: American Chemical Society, IEEE, American Physical Society and Royal chemical society.
- Subjected of biographical records in Who's Who in the World (Nov. 2010) by Marquis Who's Who publication board, USA: inclusion in which is limited to those individuals who have demonstrated outstanding achievement in their field of endeavor and who have, thereby, contributed to the betterment of contemporary society. Subjected to of biographical record in Who's Who professionals in the world (Oct. 2011, USA).

Current research fields

My research interests include the plasma synthesis of nanoscale materials and their applications in electronic and energy sciences. In particular, my work focuses on studying the fundamental electronic and optoelectronic properties of state-of-the-art nanoscale semiconductor devices that include (but not limited to) carbon nanostructures and nanoparticles, to design/synthesis novel structures with a controlled composition, morphology and dimension for electronic, space and PV applications. An emphasis is placed on the carbon nanostructured materials based

hybrid organic solar cells and transparent and conducting electrodes, and smart materials for space applications.

Organisation of the Present Curriculum Vitae:

- I. Academic background
- II. Publications/Patent/Conferences/scholarship and fellowship awards
 - 1-Books
 - 2-Patent
 - 3-Refereed Journal Papers.
 - 4-Referred proceedings and conferences papers.
 - 5-Selected refereed conferences and symposium.
 - 6-Distinctions, Awards and Credentials.
 - 7-National and International Collaborations.
 - 8-Other scientific and social Activities.
 - 9-Medias.

I. Academic background:

Ph.D. (Philosophiae Doctor) in Materials and Energy sciences. Oct. 2005–March 2010, INRS-Énergie, Matériaux et Télécommunications, Varennes, Québec, Canada.

Research field: Laser Growth and properties of Single Walled Carbon Nanotubes materials for nanoelectronic applications. Project defended with the highest honors (with “Excellent” mention, equivalent to summa cum laude).

Laureate of the Top Prize of the best Ph.D.’s Project.

– **M.Sc. (Master of Sciences) in Material and Energy Sciences.** Jan. 2004– Sept. 2005, INRS-Énergie, Matériaux et Télécommunications, Varennes, Quebec, Canada, (completed by a direct passage to the Ph.D. program). **Research field:** Development of a controlled growth of single Walled Carbon Nanotubes by means of an “all-laser” process, and their direct integration into nanoelectronic devices.

Laureate of the Top Prize for the best Master’s Project.

– **M.Sc. in Electrical Engineering (Signal Processing)**. Nov. 2000– Feb. 2003, École Nationale des Ingénieurs et Techniciens d’Algérie (ENITA). Algiers, Algeria. **Research field:** An Adaptive reduced rank “Space-Time –Adaptive-Processing” with staggered PRF for slow moving targets detection.

– **B.Sc. (Bachelor of Sciences) in Electrical Engineering** (Telecommunications). Sept. 1993–Sept. 1998, University of Sciences and Technology Houari Boumediene, (USTHB), Algiers, Algeria. **Research field:** Modelling in the “Large Signal” regime of the microwave MESFET and HEMT transistors for frequency multiplier applications. **Ranked among the top three positions over the five years of education. Project defended with the highest honors (Summa cum laude), obtained the best mark.**

II. Publications / Patent / Conferences / scholarship and fellowship awards:

1- Book and Book chapters

Book:

1- Publications

A- Patent:

Methods for preparing freeform three-dimensional structures. (Patent US 20090101278 A1). Authors: Louis Laberge Lebel, **Brahim Aïssa**, Ali El Khakani, Daniel Therriault.

B- Book and Book chapters

Book:

1. B. Aïssa, E. Haddad and W. Jamroz:

Self-healing Materials: Innovative materials for terrestrial and space applications. Smithers Rapra Publisher. Shawbury, UK, ISBN: 9781909030107 (260 pages). Sept. 2014.

2. B. Aïssa, R. Kruzelecky, E. Haddad and W. Jamroz:

Fibre Bragg Grating technology: from basic processes to applications as smart sensors for harsh environments. Smithers Rapra Publisher. Shawbury, UK, (285 pages). Submitted on Jan. 2017. Under editing process.

Book chapters:

3. B. Aïssa and M. Bououdina “Carbonaceous Nanomaterials for Hybrid Organic Photovoltaic Application” **Chapter 5**, pages 109-125. Published in Ceramic Matrix Composite, ISBN: 978-3-11-035300-6. Edited by J. Paulo Davim Editor. DE Gruyter, Germany, 2016. (<https://www.degruyter.com/view/product/337768>).

4. **B. Aïssa** “Advances in Self-healing based on carbon nanomaterials for electrical circuits. A review” **Chapter 6**, pages 127-141. Published in Ceramic Matrix Composite, ISBN: 978-3-11-035300-6. Edited by J. Paulo Davim Editor. DE Gruyter, Germany, 2016. (<https://www.degruyter.com/view/product/337768>).

5. **B. Aïssa** “Carbonaceous Materials for Polymer-Based Nanocomposites: Overview of Major Advances and Current Challenge”. **Chapter 1**, pages 27-60. Published in: Nanocomposites, synthesis, characterization and applications, ISBN: 978-1-62948-227-9. By Xiaoying Wang Editor, Nova biomedical publisher, New York. December 2013.

6. **B. Aïssa** and M. Khayyat “Self-Healing Materials Systems as a Way for Damage Mitigation in Composites Structures Caused by Orbital Space Debris”. **Chapter 1**, pages 1-25. Published in: Handbook of Research on Nanoscience, Nanotechnology, and Advanced Materials, ISBN: 9781466658240. By JP Davim Editor. IGI Global Disseminator of knowledge Publisher, Pennsylvania (USA). March 2014.

7. M. Khayyat and **B. Aïssa** “Si-NWs: Major advances in synthesis and applications”. **Chapter 5**, pages 108-130. Published in: Handbook of Research on Nanoscience, Nanotechnology, and Advanced Materials, ISBN: 9781466658240. By JP Davim Editor. IGI Global Disseminator of knowledge Publisher, Pennsylvania (USA). March 2014.

C-Refereed Journal Papers:

C.1 Published papers (Since 2006):

A77- B. Aïssa M. Nedil et al. “Photoluminescence quenching, structures, and photovoltaic properties of ZnO nanostructures decorated plasma grown single walled carbon nanotubes” Journal of Nanoparticle Research. (2017) 19: 157. doi:10.1007/s11051-017-3854-2. **(2017)**

A76- J. Haschke, ..., B. Aïssa, et al. “Energy Yield in Hot & Sunny Climates: Impact of Silicon Solar Cell Architecture and Cell Interconnection” Energy & Environmental Science 2017, Advance Article. doi: 10.1039/C7EE00286F, Available online. **(2017)**

A75- M.I. Hossain and B. Aïssa, “Effect of the structure, temperature and metal work function on the performance of organometallic perovskite solar cells” Journal of Elec. Materi. V 46(3), 1806-10 **(2017)**. doi:10.1007/s11664-016-5232-8.

A74- B. Aïssa, A. Ali, K.A. Mahmoud, T. Haddad, M. Nedil “Transport properties of a highly conductive 2D $Ti_3C_2T_x$ MXene/Graphene composite” Appl. Phys. Lett. 109, 043109 **(2016)**.

A73- B. Aïssa, R. J. Isaifan, V. E. Madhavan, A. A. Abdallah “Structural and physical properties of the dust particles in Qatar and their influence on the PV panel performance” Scientific Reports 6:31467, doi: 10.1038/srep31467 **(2016)**.

A72- A. Bentouaf, F. H. Hassan, B. Aïssa “First-principles study on the structural, electronic, magnetic and thermodynamic properties of full Heusler alloys Co_2VZ (Z = Al, Ga)” journal of electronic materials **(2016)**. doi:10.1007/s11664-016-4859-9 **(2016)**.

- A71-** A. Bentouaf , R. Mebsout, H. Rached, S. Amari, **B. Aïssa** “Theoretical investigation of the structural, electronic, magnetic and elastic properties of binary cubic C15-Laves phases TbX_2 (X = Co and Fe)” J. Alloys and compounds V. 689, 25, 885–893 (2016).
- A70-** E.H. Abdul-Hafidh and **B. Aïssa** “A theoretical prediction of the paradoxical surface free energy for FCC metallic nanosolids”, Appl. Surf. Sci. Vol 379, 411-414, May 2016, doi: 10.1016/j.apsusc.2016.04.102 (2016).
- A69-** E.H. Abdul-Hafidh and **B. Aïssa** “Predictions of the Mechanical and Structural Properties of Spherical Platinum Nanoparticles by Chen-Mobius Lattice Inversion Method” Journal of Computational and Theoretical Nanoscience Vol. 12, 5076–5080, (2015).
- A68-** M.M. Khayyat, **B. Aïssa**, E. H. Abdul-Hafidh and M. Nedil “Controlled Crystal-Growth and Structures of Silicon Nanowires for Smart Applications” SDRP Journal of Nanotechnology & Material Science V1 (1):1-8 (2015).
- A67-** **B. Aïssa**, M. Kivambe, O. El Daif, A.A. Abdalla, F. Ali and N. Tabet “Emerging frontiers of n-type silicon material for photovoltaic applications: the impurity-defect interactions” Front Nanosci Nanotech, 2015 doi: 10.15761/FNN.1000102 Volume 1(1): 2-12 (2015).
- A66-** **B. Aïssa**, M. Nedil, J. Kroeger, T. Haddad, and F. Rosei “Memory operation devices based on light-illumination ambipolar carbon-nanotube thin-film-transistors” J. Appl. Phys. **118**, 124507 (2015); <http://dx.doi.org/10.1063/1.4931663> (2015).
- A65-** **B. Aïssa**, N.K. Memon, A. Ali and M.K. Khraishah “Recent progress in the growth and applications of graphene as a smart material: a review”. Invited paper. Front. Mater. 2:58. doi: 10.3389/fmats.2015.00058 (2015).
- A64-** **B. Aïssa**, M. A. Habib, E.H. Abdul-Hafidh, M. Bououdina, M. Nedil “Carbon Nanotubes materials and their Related Polymer Nanocomposites: Frontiers, Challenges and Strategic Priorities” Int. J. Materials Engineering Innovation, Vol. 6, Nos. 2/3, pp 185-223, (2015)
- A63-** R. V. Kruzelecky, V. Latendresse, **B. Aïssa**, et al. “Lunar Dust In-situ Experiment and Operational Considerations for the Potential CABLE Canadian American British Lunar Explorer” AIAA (American Institute of Aeronautics and Astronautics) paper No 2015-334 (2015).
- A62-** **B. Aïssa**, M. Nedil, M.A. Habib, E.H. Abdul-Hafidh, and F. Rosei “High-performance thin-film-transistors based on semiconducting-enriched single-walled carbon nanotubes processed by electrical-breakdown strategy” Applied Surface Science 238, 349-355 (2015).
- A61-** **B. Aïssa**, H. Hena-Zamal, H., M. Asgar-Khan, E. Haddad, D. Therriault, F. Rosei “Fabrication of 3D micro-vascular network based carbon nanotube materials by the direct-write microfluidic infiltration approach for self healing applications” Materials Science and Technology 2013, Volume 4, 2014, pages 2957-2963 (2014).
- A60-** **B. Aïssa**, M. Nedil, M.A. Habib, D. Therriault, E. Coulibaly and F. Rosei “Fluidic patch antenna based on liquid metal alloy/single-wall carbon-nanotubes operating at the S-band frequency” Appl. Phys. Lett. **103**, 063101 (2013).
- A59-** Z. Hamoudi, **B. Aïssa**, M.A. El Khakani and M. Mohamedi “Electroanalytical study of methanol oxidation and oxygen reduction at carbon nanohorns-Pt nanostructured electrodes” Electroanalysis, 25, 538 (2013).

A58- Z. Hamoudi, **B. Aïssa**, M.A. El Khakani and M. Mohamedi “Electrocatalytic Reduction of Oxygen at Binderless Carbon-Pt Nanostructured Electrodes: Effects of the Nature of the Carbon Support and the Pt Morphology” *Int. J. Electrochem. Sci.*, **7**, 12227, (2012).

A57- **B. Aïssa**, K. Tagziria, E. Haddad, W. Jamroz, J. Loiseau, A. Higgins, M. Asgar-khan, S. V. Hoa, P.G. Merle, D. Therriault and F. Rosei “The self healing capability of carbon fibre composite structures subjected to hypervelocity impacts simulating orbital space debris” *ISRN Nanomaterials*, doi:10.5402/2012/351205, Volume 2012, Article ID 351205, (2012).

A56- **B. Aïssa**, E. Haddad, W. Jamroz, S. Hassani, R. D. Farahani, P. G. Merle and D. Therriault “Micromechanical characterization of single-walled carbon nanotube reinforced ethylidene norbornene nanocomposites for self healing applications” *Smart Mater. Struct.* **21** (2012) 105028 (2012).

A55- **B. Aïssa**, E. Hafeez, N. Tabet, M. Nedil, D. Therriault, and F. Rosei “Ambipolar operation of hybrid SiC-Carbon nanotube based thin film transistor for logic circuit applications”. *Appl. Phys. Letters* **101**, 043121 (2012).

A54- **B. Aïssa**, D. Therriault, R.D. Farahani, L.L. Lebel and M.A. El Khakani “Electrical transport properties of single wall carbon nanotube/polyurethane composite based field effect transistors fabricated by UV-assisted direct-writing technology”. *Nanotechnology* **23**, 115705. Doi:10.1088/0957-4484/23/11/115705. (2012).

A53- **B. Aïssa**, D. Therriault, E. Haddad and W. Jamroz “Self-healing in composite materials systems: Overview of major Approaches and recent developed Technologies”. Invited paper. *Advances in Materials Science and Engineering*, Volume 2012, Article ID 854203, 17 pages doi:10.1155/2012/854203 (2012).

A52- **B. Aïssa**, N. Tabet, M. Nedil, D. Therriault, F. Rosei and R. Nechache “Electromagnetic Energy absorption potential and microwave heating capacity of SiC thin films in the 1-16 GHz frequency band” *Applied Surface Science* **258**, 5482 (2012).

A51- **B. Aïssa**, R. Nechache, E. Haddad, W. Jamroz, P. E. Merle and F. Rosei “Ruthenium Grubbs’ catalyst nanostructures grown by UV-excimer-laser ablation for self-healing applications” *Applied Surface Science* **258** (2012), pp. 9800-9804. doi: 10.1016/j.apsusc.2012.06.032 (2012).

A50- R. D. Farahani, M. Pahlavanpour, H. Dalir, **B. Aïssa**, M. A. El Khakani, M. Lévesque, D. Therriault “Manufacturing composite beams reinforced with three-dimensionally patterned-oriented carbon nanotubes through microfluidic infiltration” *Materials and Design* **41**, 214 (2012).

A49- **B. Aïssa**, D. Therriault and M.A. El Khakani “On-substrate growth of single-walled carbon nanotube networks by an “all-laser” processing route”. *Carbon*, **49**, 2795-2808 (2011).

A48- **B. Aïssa**, R. Nechache, D. Therriault, F. Rosei, and M. Nedil “High-frequency electromagnetic properties of epitaxial Bi₂FeCrO₆ thin films grown by excimer-laser-deposition process” *Appl. Phys. Letters* **99**, 183505 (2011).

A47- **B. Aïssa**, L.L. Lebel, M. A. Habib, D. Therriault, T. A. Denidni and M.A. El Khakani “Super-high-frequency shielding properties of excimer-laser-synthesized-single-wall-carbon-nanotubes/polyurethane nanocomposite films”. *J. Appl. Phys.* **109**, 084313 (2011).

A46- R. Kruzelecky, **B. Aïssa**, B. Wong, E. Haddad, W. Jamroz, E. Cloutis, I. Rosca, S. Hoa, D. Therriault, A. Ellery, S. Martel and X.-X. Jiang “Project MoonDust: Characterization and Mitigation of Lunar Dust” AIAA (American Institute of Aeronautics and Astronautics) paper No 2011-5184. Doi: <http://dx.doi.org/10.2514/6.2011-5184> (2011).

A45- R. Farahani, H. Dalir, **B. Aïssa**, My Ali El Khakani, Martin Lévesque and Daniel Therriault, “Micro-infiltration of three-dimensional porous networks with carbon nanotube-based nanocomposite for material design”, *Composites Part A: Applied Science and Manufacturing*, V. 42, Issue 12, 1910-1919 (2011).

A44- V. Le Borgne, **B. Aïssa**, M. Mohamedi, Y.A. Kim, M. Endo and M. A. El Khakani “Pulsed KrF-laser synthesis of single-wall-carbon-nanotubes: effects of catalyst content and furnace temperature on their nanostructure and photoluminescence properties” *J. Nanopart. Res.* (2011) 13: 5759. doi:10.1007/s11051-011-0409-9 (2011).

A43- M. A. Habib, M. A. Barkat and **B. Aïssa** “NG-Distribution Radar Sea clutter Embedded with Thermal Noise” Vol. 2011, Issue 4, pp 1-4. Special issue of the SSPD (Sensor Signal Processing for Defence) Conference (UK, London, Sept. 28-29, 2011). ISBN: 978-1-84919-661-1. 10.1049/ic.2011.0166, (2011).

A42- L. L. Lebel, **B. Aïssa**, M. A. El Khakani and D. Therriault “Ultraviolet-assisted direct-write fabrication of carbon nanotube/polymer nanocomposite micro-coils” *Adv. Mater.*, Volume 22, Issue 5, 592-596, (2010).

A41- L. L. Lebel, **B. Aïssa**, M. A. El Khakani and D. Therriault “Preparation and Mechanical Characterization of Laser Ablated Single-Walled Carbon-Nanotubes/Polyurethane Nanocomposite Microbeams” *Composites Science and Technology* 70, N3, 518–524 (2010).

A40- Z. Hamoudi, **B. Aïssa**, M. A. El Khakani and M. Mohamedi “Synthesis, Characterization and Electrocatalytic Properties of Ultra Highly Densely Packed Carbon Submicron Spheres Chains-Sheathed Carbon Microfibers Composites” *J. Phys. Chem. C* 2010, 114, 1885–1891 (2010).

A39- R. Kruzelecky, B. Wong, **B. Aïssa**, E. Haddad, W. Jamroz, E. Cloutis, I. Rosca, S. Hoa, D. Therriault and A. Ellery “MoonDust Lunar Dust Simulation and Mitigation” AIAA (American Institute of Aeronautics and Astronautics), paper No 2010-6023, doi: <http://dx.doi.org/10.2514/6.2010-6023> (2010).

A38- **B. Aïssa** and M.A. El Khakani “The channel length effect on the electrical performance of suspended-single-wall-carbon-nanotubes-based field effect transistors”, *Nanotechnology* 20 175203. DOI: [10.1088/0957-4484/20/17/175203](https://doi.org/10.1088/0957-4484/20/17/175203). (2009).

A37- **B. Aïssa**, Z. Hamoudi, H. Takahashi, K. Tohji, M. Mohamedi and M. A. El Khakani “Carbon Microfibers Sheathed with Carbon Nanohorns towards Multifunctional Nanomaterials for Electrochemical Applications”, *Electrochemistry Communications* 11, 862–866 (2009).

A36- M. A. El Khakani, V. Le Borgne, **B. Aïssa**, F. Rosei, C. Scilletta, E. Speiser, M. Scarselli, P. Castrucci and M. De Crescenzi “Photocurrent generation in random networks of multiwall-carbon-nanotubes grown by an “all-laser” process”. *Appl. Phys. Lett.* 95, 083114 (2009).

A35- **B. Aïssa**, C. Fauteux, D. Therriault and M.A. El Khakani “Structural and Photoluminescence Properties of laser processed ZnO/Carbon Nanotube Nanohybrids” *Journal of Material Research* Vol. 24, No. 11, 3313-3320 (2009).

A34- **B. Aïssa**, M. Barkat, B. Atrouz, M. Habib and M. C. E. Yagoub “An Adaptive Reduced Rank STAP Selection with Staggered PRF; Effect of Array Dimensionality” Progress in Electromagnetic Research C, Vol. 6, 37-52, (2009).

A33- B. Atrouz, A. Alimohad and **B. Aïssa** “An Effective Jammers Cancellation by means of a rectangular array antenna and a Sequential Block LMS algorithm: Case of mobile sources” Progress In Electromagnetics Research C, Vol. 7, 193-207, (2009).

A32- L.L. Lebel, **B. Aïssa**, O.A.P. Monroy, M. A. El Khakani and D. Therriault “Three-dimensional micro structured nanocomposite beams by microfluidic Infiltration” J. Micromech. Microeng. 19, 125009 (2009).

A31- L.L. Lebel, **B. Aïssa**, MA El Khakani and D. Therriault “Tridimensional Microstructures of C-SWNT Reinforced Polymer Nanocomposite by Means of a Microfluidic Infiltration Approach” Mater. Res. Soc. Sym. Vol. 1056 pp. 173-178 (2008).

A30- M. A. Habib, M. Barkat, **B. Aïssa** and T. A. Denidni “Ca-Cfar Detection Performance of Radar Targets Embedded in “Non Centered Chi-2 Gamma” Clutter” Progress In Electromagnetics Research, PIER 88, 135-148, (2008).

A29- J.-H. Yi, **B. Aïssa** and M.A. El Khakani “Ultra-high oxidation resistance of suspended SWNT bundles grown on patterned silicon wafers by laser ablation”, Journal of Nanosci. Nanotechnol. Vol. 7, 3394 (2007).

A28- T. Bordjiba, M. Mohamedi, H. Dao, **B. Aïssa** and M. A. El Khakani “Enhanced structural and electrochemical properties of nanostructured carbon nanotubes coated microfibrrous carbon paper”, Chemical Physics Letters, Vol. 441, 88 (2007).

A27- M. A. El Khakani, J.-H. Yi and **B. Aïssa** “Lateral growth of single wall carbon nanotubes on various substrates by means of an “all-laser” synthesis approach”, Diamond and related materials, Vol. 15, Issues 4-8, 1064 (2006).

A26- M. A. El Khakani, J.-H. Yi and **B. Aïssa** “Localized growth of suspended SWCNTs by means of an “all-laser” process and their direct integration into nanoelectronic devices», IEEE, transaction on nanotechnology Vol. 5 N3, 237 (2006).

C.2 Refereed proceedings and conferences papers:

A25- A. Abdalla, O. EL Daif, **B. Aïssa** et al. “Towards an optimum silicon heterojunction solar cell configuration for high temperature and high light intensity environment” In proceedings of the 7th International Conference on Crystalline Silicon Photovoltaics in Freiburg, Germany, April 3-5, 2017, in special issue of Energy Procedia (accepted, in revision).

A24- M. Kivambe, **B. Aïssa** and N. Tabet “Emerging technologies in crystal growth of Photovoltaic Silicon: Progress and Challenges”, Paper ID 352, in proceeding of the International Photovoltaic Power Generation Conference & Exhibition SNEC 2017, Shanghai, China, in special issue of Energy Procedia, May 2017 (accepted, in revision).

A23- J. Haschke,...**B. Aïssa**, et al. “Temperature dependencies of different silicon solar cell architectures: from cells to modules”. Proceeding of the International PVSEC-26, 28 October 2016, Singapore.

- A22-** A.A. Abdallah, O. El Daif, **B. Aïssa**, M. Kivambe, N. Tabet” Towards an Optimum Silicon Heterojunction Solar Cell Configuration for High Temperature and High Light Intensity Environment” ID 21353. Proceeding of the Silicon PV conference, Freiburg, Germany, 2017.
- A21-** A. Ali, K. Mahmoud and **B. Aïssa** “Highly Conductive 2D Ti₃C₂T_x (MXene)/Graphene composite: synthesis and electrical transport study”, Proceeding of the MRS fall meeting, Symposium NM2: 2D Layers and Heterostructures beyond Graphene—Theory, Preparation, Properties and Devices. Paper NM2.6.32, Boston, USA, Nov. 29, 2016.
- A20-** **B. Aïssa**, M. Mohammaznezhad, R. Akilimali and F. Rosei “Improvement of the exciton dissociation efficiency in hybrid OPV devices by the incorporation of carbon Nanomaterials” Proceeding of the IEEE-ICPRE conference, Shanghai, China, Oct. 23, 2016.
- A19-** I. Gammoudi, M. Nedil, **B. Aïssa** and A. Djaiz, "Gas sensor based on RFID tag antenna for harsh environment," IEEE Int. Sym. on Antennas and Propagation (APSURSI), 2016, pp. 1271-1272. doi: 10.1109/APS.2016.7696343.
- A18-** E. Haddad, R.V. Kruzelecky, K. Tagziria, **B. Aïssa** et al. “High Temperature Optical Fiber Sensor for Atmospheric re-entry” In proceeding of International Conference on Space Optics ICSSO, pp- 1-7, Oct. 2016, Biarritz, France
- A17-** **B. Aïssa**, A. Belaidi “Morphology, Photoluminescence and Photovoltaic Properties of Laser Processed ZnO/carbon Nanotube Nanohybrids” Qatar Foundation Annual Research Conference Proceedings, V2016, N 1, p EEPP2245, HBKU Press, 2016.
- A16-** **B. Aïssa**, A. Abdallah, M. Kivambe, N. Tabet, J. Cattin, J. Haschke, J. P. Seif, A. Tomasi, S. De Wolf, C. Ballif “Engineering of High Performance Solar Cells for Harsh Desert Environment Applications” Qatar Foundation Annual Research Conference Proceedings, V 2016 N1, EEPP3363, HBKU Press, 2016.
- A15-** M.I. Hossain, A. Belaidi, f. Alharbi , S. Rashkeev, **B. Aïssa**, et al. “Growth of Hybrid Perovskites (HP) Light Harvesting Layer and TiO₂ Electron Transport Material for Solar Cells Application” Qatar Foundation Annual Research Conference Proceedings, V 2016 N1, EESP2698, HBKU Press, 2016.
- A14-** R. V. Kruzelecky, **B. Aïssa**, J. Lavoie, E. Haddad, W. Jamroz, E. Cloutis, D. Therriault “Lunar Dust Mitigation for the Potential LORE Science Payload” Proceeding of the 43rd International Conference on Environmental Systems ICES 2014. Arizona, USA. Session 510, Paper 281 (17 pages) (2014).
- A13-** **B. Aïssa**, E. Haddad, K. Tagziria, W. Jamroz, J. Loiseau, A. Higgins “Evaluation of the self healing capability of composites structures containing embedded FBG sensors and carbon nanotube based nanocomposites”. Proceeding of the 19th International Conference on Composite Materials –ICCM19. July 28-August 2, 2013. Montreal, Canada (2013).
- A12-** **B. Aïssa**, D. Therriault, E. Haddad, W. Jamroz, K. Tagziria, J. Loiseau, A. Higgins, M. A. Khan and S. V. Hoa “Mitigating the effects of space debris on composites structures embedding self healing and carbon nanotube nanocomposite materials” Proceedings of the International conference on self healing materials ICSHM’2013, Ghent, Belgium, June 16-20, 2013. pp 504-507 (2013).

A11- **B. Aïssa** and M. Nedil “Design and Fabrication of Fluidic Patch Antenna based liquid metal alloy (EGaln) and Single wall carbon nanotubes nanocomposite” Proceeding of the IEEE Antennas and Propagation Society, APS international symposium (Digest). Pages 1856-1857. Doi 10.1109/APS.2013.6711586. (2013).

A10- M. Asgar-Khan, **B. Aïssa**, E. Haddad et al., “Experimental Investigation of the Self Healing Performance of CFRP Composite Subjected to High Velocity Impact” Proceeding of the 3rd Int. conf. on self healing materials (19 pp), 27-29 June, 2011, Bath, UK (2011).

A09- **B. Aïssa**, E. Haddad, K. Tagziria et al., “Exploring Self Healing of CFRP Laminates Exposed to Hypervelocity Small Pellets Simulating Space Debris”, Proceedings of the American Society for Composites—26th Technical Conference/Second Joint US-Canada Conference on Composites. Paper 1066. (20 pp). Concordia University, Sept 26-28, 2011, Montreal, Canada (2011).

A08- H. Moussaddy, R. D. Farahani, **B. Aïssa**, M. A. El Khakani, M. Lévesque and D. Therriault “Mechanical properties of chemically-treated carbon nanotube nanocomposite microfibers: experimental and modeling studies” Proceedings of the American Society for Composites—26th Technical Conference/Second Joint US-Canada Conference on Composites. Paper 1122. (12 pp). Concordia University, Sept 26-28, 2011, Montreal, Canada (2011).

A07- R. D. Farahani, **B. Aïssa**, M. A. El Khakani, M. Lévesque and D. Therriault “UV-Assisted Direct Write Fabrication of Microstructures using Biotin-Grafted SWCNT/Epoxy nanocomposites: Mechanical and Rheological studies” Proceedings of the American Society for Composites—26th Technical Conference/Second Joint US-Canada Conference on Composites. Paper 1102. (22 pp). Concordia University, Sept 26-28, 2011, Montreal, Canada (2011).

A06- R.V. Kruzelecky, **B. Aïssa**, S. Loranger et al. “Moondust Characterization and mitigation”, Proceedings of the 41st International Conference on Environmental Systems (ICES), 17–21 July 2011. Portland, Oregon. USA (2011).

A05- R. V. Kruzelecky, B. Wong, **B. Aïssa** et al. “Moondust Lunar Dust Simulation and Mitigation”, Proceedings of the 40th International Conference on Environmental Systems. Barcelona, Spain, 11-15 July 2010 (2010).

A04- V. Le Borgne, **B. Aïssa**, F. Rosei, M.A. El Khakani, P. Castrucci, C. Scilletta, E. Speiser, M. Scarselli, M. De Crescenzi “Photocurrent in multi wall carbon nanotubes device” 9th IEEE Conference on Nanotechnology, Genoa, July 26-30, (2009).

A03- L.L. Lebel, **B. Aïssa**, M. A. El Khakani, and D. Therriault “Single-walled carbon nanotubes / polymer nanocomposites micro beams by means of ultraviolet-assisted direct-write assembly”. Design, Manufacturing and Applications of Composites: Proceedings of the 7th Joint Canada-Japan Workshop on Composites, Tsukuba, Japan. pp. 40-47, (2008).

A02- **B. Aïssa** and M. Barkat “Influence des paramètres radars sur le traitement (STAP) appliqué aux radars aéroportés”, actes de la 2^{ème} Conf. Intern. (CGE'02), pp. 87-91, (2002).

A01- A. Alimohad, B. Atrouz and **B. Aïssa**, “Proposition et analyse d'un algorithme LMS modifié pour l'annulation des interférences au moyen d'un réseau d'antennes rectangulaire”, actes de la 2^{ème} Conf. Internationale (CGE'02), pp. 45-50, (2002).

Submitted journal and conference papers:

- **B. Aïssa**, M. Nedil, J. Kroeger, M. I. Hossain, K. A. Mahmoud, F. Rosei “Electromagnetic absorbance capacity of the N-doped single wall carbon nanotube in the extremely high frequency band”, submitted to Small. MS Ref.: sml.201701452, May 2017.
- **B. Aïssa**, I. A. Majidi, M. Nedil, H.H. Zamal, E. Haddad, F. Erchiqui “Carbon nanotubes-ENb nanocomposites based self-healing materials for patch antenna”, Submitted to Chem. Phys. Lett. MS Ref.: cpl.0-20171259833, May 2017.
- R. J. Isaifan, , A. Samara, W. Suwaileh, D. Johnson, W. Yiming, A. A. Abdallah and **B. Aïssa** “Structural and Optical Characterization of an Easy to Scale up TiO₂ Thin Films Prepared by Adsorptive Self-Assembly” Submitted to Sci. Rep. MS. Ref.:SREP-17-20804. April 2017.
- R. Al-Gaashani, S. Radiman, **B. Aïssa**, F. Alharbi and N. Tabet “Study of SiC based composites as microwave susceptors for one-step synthesis of ZnO nanostructures” Submitted to Materials Chemistry and Physics MS Ref.: MATCHEMPHYS-D-16-01989, Jan. 2017.
- A. Oualdine, A. Bentouaf Ali, C. Amar, N. Boukhari, B. A. Zahira, M. Ameri and **B. Aïssa** “Ab-initio investigation of the structural, elastic and electronic properties of CeN and LuN using LSDA + U approach” Submitted to Chinese Journal of Physics. MS Ref.: CJPH_2017_386. April 2017.
- R. V. Kruzelecky, J. Lavoie, P. Murzionak, J. Heapy, I. Sinclair, W. Jamroz , E. Cloutis, N. Ghafoor, **B. Aïssa** “DTVAC Dusty Planetary Thermo-VACuum Simulator” Submitted as a Proceeding Conf. paper to the 47th International Conference on Environmental Systems, ICES-2017-235, To be held on 16-20 July 2017, Charleston, South Carolina – USA.

C4- Selected refereed Conferences and Symposium presentation

(*: Conf. Presenter)

C71- B. Aïssa*, M. Nedil “Silicon heterojunction solar cell for High temperature climate” Invited poster at the Materials Science and engineering symposium, Texas A&M, Doha, March 16, 2017.

C70- J. Haschke*, ..., **B. Aïssa** et al. “Impact of the Infrared Response of Crystalline Silicon Solar Cells on Temperature Coefficient and Energy Yield” accepted for Oral presentation at EUPVSEC, Topic 2: Silicon Photovoltaics Subtopic 2.5: Characterization & Simulation Methods 25 - 29 Sept. 2017, Amsterdam, The Netherlands.

C69- J. Haschke*, ..., **B. Aïssa** et al. “Energy Yield in Hot & Sunny Climates: Impact of Silicon Solar Cell Architecture and Cell Interconnection” Accepted for Oral presentation at the IEEE PVSC-44, JUNE 25-30, 2017, Washington DC, USA.

C68- A. Abdalla, O. EL Daif, B. Aïssa, N. Tabet* et al. “Towards an optimum silicon heterojunction solar cell configuration for high temperature and high light intensity environment” Poster presentation at the 7th International Conference on Crystalline Silicon Photovoltaics in Freiburg, Germany, April 3-5, 2017.

C67- M. Kivambe*, **B. Aïssa** and N. Tabet “Emerging technologies in crystal growth of Photovoltaic Silicon: Progress and Challenges”, Oral presentation at the International Photovoltaic Power Generation Conference & Exhibition SNEC 2017, Shanghai, China.

C66- B. Aïssa “GIWAXS investigation of the photoactive layer in the hybrid heterojunction photovoltaic devices”, Oral presentation at ICSIM-2017 conference, Norway, Feb. 4-5, 2017.

C65- M. Mohammadnezhad*, R. Akilimali, **B. Aïssa**, F. Rosei “Effect of chemical treatment on properties of boron and nitrogen co-doped single-walled carbon nanotubes” Poster presentation at the CSACS/CQMF Advanced materials annual conference, 3-4 Mai, 2016. École de technologie supérieure, Montreal, Quebec.

C64- A. Ali*, K. Mahmoud and **B. Aïssa** “Highly Conductive 2D Ti₃C₂T_x (MXene)/Graphene composite: synthesis and electrical transport study”, Oral presentation at the MRS fall meeting, Symposium NM2: 2D Layers and Heterostructures beyond Graphene—Theory, Preparation, Properties and Devices, Boston, USA, Nov. 29, 2016.

C63- B. Aïssa, M. Mohammadnezhad*, R. Akilimali, and F. Rosei “Incorporation of carbon nanomaterials for the improvement of the exciton dissociation efficiency in hybrid OPV” Oral presentation at Nano 2016-Quebec, Aug. 8-12, 2016.

C62- M. Mohammadnezhad*, F. Rosei and **B. Aïssa** “Effect of hydrothermal temperature on morphology, growth orientation and phase transformation of ZnO thin film” Oral presentation at Nano2016-Quebec, Aug. 8-12, 2016.

C61- M. Mohammadnezhad*, **B. Aïssa**, R. Akilimali, and F. Rosei “Effect of chemical treatment on properties of boron and nitrogen co-doped single-walled carbon nanotubes” Oral presentation at Nano2016-Quebec, Aug. 8-12, 2016

C60- J. P. Seif*,..., **B. Aïssa** et al. « Crystalline Silicon Solar Cells: Temperature Dependencies and Impact of Device Architecture” Oral presentation at 6th SiliconPV, Chambéry, France, March 2016.

C59- B. Aïssa*, M. Nedil and F. Rosei “Morphology and optoelectronic dependence of Single walled Carbon nanotubes and Graphene-based hybrid organic photovoltaic applications” Oral presentation at the international Conference of Nanoscience and Nanotechnology 2016, Canberra, Australia, 7 - 11 February 2016

C58- B. Aïssa* and A. Belaidi “Morphology, photoluminescence and photovoltaic properties of laser processed ZnO/carbon nanotube nanohybrids” Poster at the Qatar Foundation Annual Research Conference ARC 16, Doha, March 2016.

C57- B. Aïssa* et al. “Engineering of High Performance Solar Cells for Harsh Desert Environment applications” Poster at the Qatar Foundation Annual Research Conference ARC 16, Doha, March 2016.

C56- M. I. Hossain*, ..., **B. Aïssa** et al. “Growth of Hybrid Perovskites (HP) Light Harvesting Layer and TiO₂ Electron Transport Material for Solar Cells Application” Poster at the Qatar Foundation Annual Research Conference ARC 16, Doha, March 2016.

C55- J. P. Seif*,..., **B. Aïssa** et al. “Impact of Solar Cell Architecture on the Temperature Dependency of its Characteristics” Oral presentation at the 2016 EU-PVSEC Conference, 20-24 June 2016, Munich, Germany.

C54- I. Gammoudi*, **B. Aïssa**, M. Nedil, M.M Abdallah “CNT-RFID passive tag antenna for gas sensing in underground mine” Oral presentation at the IEEE international symposium on antennas

and propagation and North American Radio Science meeting, 19-25 July 2015, Vancouver, Canada. **2015**.

C53- B. Aïssa*, M. Nedil, and F. Rosei “Structural correlation with optoelectronic properties of carbon nanomaterials-based photovoltaic devices” Oral presentation at the Advanced Materials World Congress, Stockholm, Sweden, Aug. 22-26, **2015**.

C52- B. Aïssa*, N. Memon, M. Nedil, “Single walled Carbon nanotubes-based composites for organic photovoltaic application” Poster at the Swiss Chemical Society Fall meeting 2015, EPFL Lausanne, Switzerland, Sep. 4, **2015**.

C51- B. Aïssa*, N. Memon, and M. K. Khreishah “Optoelectronic properties and structural dependence of carbon nanomaterials-based hybrid organic photovoltaic devices”, Oral presentation at South African Conference on Photonic Materials. Mabula Lodge, South Africa, May 3-5, **2015**.

C50- B. Aïssa*, N. Memon, and M. Nedil, “Optoelectronic properties of P3HT/Single walled carbon nanotubes composite for PV applications” Poster at Materials Science and Engineering Symposium 2015. March 17, Texas A&M University, Doha, Qatar. **2015**

C49- B. Aïssa*, M. Nedil, F. Rosei and E. Haddad” Self-healing materials based Carbon Nanotubes nanocomposite for space applications” Oral presentation at BITs 1st world congress of smart materials -2015. Smart Nanotube and Nanowire Session. Republic of Korea. Busan, March 22-26, **2015**. **Invited talk**.

C48- B. Aïssa*, M. Nedil, R. Akilimali and F. Rosei “Morphology and optical dependence of carbon nanomaterials-based hybrid organic photovoltaic cells” Oral presentation at the Global conference on energy and sustainable development, 24th – 26th February 2015, Technology Park, Coventry University Coventry, United Kingdom. **2015**.

C47- B. Aïssa* “High-mobility Thin-Film-Transistors based on semiconducting-enriched single-walled carbon nanotubes processed by electrical-breakdown strategy” Oral presentation at BIAMS12 Conference, Tsukuba (NIMS), Japan. June 22-26, **2014**.

C46- B. Aïssa*, H. H. Khan, E. Haddad, D. Therriault and F. Rosei “Elaboration of 3D nanocomposite beams based on single-walled carbon nanotube materials for self healing processes” Oral presentation at ICFPAM2013 Conference, Auckland, New Zelande. December 8-13 (**2013**).

C45- B. Aïssa, H. H. Khan*, E. Haddad, D. Therriault and F. Rosei “New composite self healing material for aerospace” Oral presentation at the Joint Cologne-Canada Workshop on Functional materials, Montreal, Canada. May 23-24, **2013**.

C44- B. Aïssa, H. H. Khan*, E. Haddad, D. Therriault and F. Rosei “Fabrication of 3D micro-vascular network based Carbon nanotube materials by the direct write microfluidic infiltration approach for self healing applications” Oral presentation at MS&T’13 Conference, Montreal, Quebec, Canada. October **2013**.

C43- B. Aïssa*, E. Haddad, K. Tagziria, W. Jamroz, J. Loiseau, A. Higgins. “Evaluation of the self healing capability of composites structures containing embedded FBG sensors and carbon nanotube based nanocomposites”, Oral presentation at 19th International Conference on Composite Materials –ICCM19. Montreal, Canada. July 28-August 2, **2013**.

C42- B. Aïssa*, E. Haddad and Wes Jamroz “Mitigating the effects of space debris on composite structures embedding self healing and carbon nanotube nanocomposite materials” Oral presentation at the 4th International Conference on Self-Healing Materials, Ghent, Belgium, 16-20 June **2013**.

C41- B. Aïssa, K. Tagziria, W. Jamroz, E. Haddad*, M. Asgar-Khan, S. V. Hoa, J. Loiseau, J. Verreault, A. Higgins “Monitoring with Fiber sensors and Self Healing of CFRP Laminates Exposed to Hypervelocity Small Pellets Simulating Space Debris” Oral presentation at the 12th International Symposium on Materials in the Space Environment (IMSE-12) ESA, ESTEC Noordwijk, The Netherlands. September 24-28, **2012**.

C40- B. Aïssa, E. Haddad*, K. Tagziria, M. Ait-Ouaziz, R. Kruzelecky and Wes Jamroz “contribution of the carbon nanotubes material in healing efficiency for space debris mitigation” Oral presentation at the Canadian space summit 2012, Quebec, Canada. Nov. 14, **2012**.

C39- E. Haddad*, **B. Aïssa**, K. Tagziria, M. Ait-Ouaziz, R. Kruzelecky and Wes Jamroz “Mitigating the Effects of Space Debris on Composite Structures” Oral presentation at the International CASI-Astro-Conference. Quebec, Canada, 23-25 April **2012**.

C38- B. Aïssa, R. V. Kruzelecky*, E. Haddad and W. Jamroz “Technologies for Smart Composites with embedded Sensing and Self-repair” Oral presentation at the Canadian Workshop on Composite Structures and Materials. Canadian Space Agency, Quebec, Canada. Nov. 14-16, **2011**.

C37- B. Aïssa*, D. Therriault, E. Haddad and W. Jamroz “Micro/nanoindentation characterization and thermal stability of CNT/5E2N nanocomposite for self healing applications”, Poster at the Aquitaine Conference on polymer 2011, Arcachon, France, 18-21 October **2011**.

C36- M. A. Habib*, M. A. Barkat and **B. Aïssa** “NG-Distribution Radar Sea clutter Embedded with Thermal Noise” Oral presentation at the IEEE of SSPD Conference on Sensors, London, UK. Sept. 28-29, **2011**.

C35- H. Moussaddy*, R. D. Farahani, **B. Aïssa**, M. A. El Khakani, M. Lévesque and D. Therriault “Mechanical properties of chemically-treated carbon nanotube nanocomposite microfibers: experimental and modeling studies” Oral presentation at the Second Joint US-Canada Conference on Composites. Concordia University, Montreal, Canada. Sep. 26-28, **2011**.

C34- B. Aïssa*, E. Haddad, K. Tagziria et al., “Exploring Self Healing of CFRP Laminates Exposed to Hypervelocity Small Pellets Simulating Space”, Oral presentation at the Second Joint US-Canada Conference on Composites. Concordia University, Montreal, Canada. Sep. 26-28, **2011**.

C33- R. D. Farahani*, **B. Aïssa**, M. A. El Khakani, M. Lévesque and D. Therriault “UV-Assisted Direct Write Fabrication of Microstructures using Biotin-Grafted SWCNT/Epoxy nanocomposites: Mechanical and Rheological studies” Oral presentation at the Second Joint US-Canada Conference on Composites. Concordia University, Montreal, Canada. Sep. 26-28, **2011**.

C32- M. Asgar-Khan*, **B. Aïssa**, E. Haddad et al., “Experimental Investigation of the Self Healing Performance of CFRP Composite Subjected to High Velocity Impact” Oral presentation at the 3rd international Conference on self healing materials, Bath, UK. 27-29 June, **2011**.

C31- B. Aïssa*, D. Therriault, R.D. Farahani, E. Haddad et al., "Fabrication of Three-dimensional Micro-vascular "Single-walled Carbon Nanotubes/5-Ethylidene-2-norbornene" Nanocomposite Beams by Microfluidic Infiltration". Poster at the Micro- and Nanofluidic Systems for Materials Synthesis, Device Assembly, and Bioanalysis Symposium. MRS spring meeting. San Fransisco. CA, USA. 25-29 April, **2011**.

C30- R. V. Kruzelecky*, **B. Aïssa**, S. Loranger, E. Haddad "Atomic Force Microscopy Moondust Characterization and magneto-mitigation", Oral presentation at 41st International Conference on Environmental Systems (ICES). Marriott Portland Downtown Waterfront. Portland, Oregon. USA. 17–21 July **2011**.

C29- R. V. Kruzelecky*, B. Wong, **B. Aïssa** et al. "Moondust Lunar Dust Simulation and Mitigation", Oral presentation at the 40th International Conference on Environmental Systems. Barcelona, Spain. 11-15 July **2010**.

C28- Z. Hamoudi*, **B. Aïssa**, M.A. El khakani and M. Mohamedi "Carbon spheres chains as anode catalyst support for direct methanol fuel cells" Oral presentation at the International Society of Electrochemistry (ISE). Satellite Student Regional Symposium on Electrochemistry. McGill University, Montreal, Canada. July 16, **2010**.

C27- B. Aïssa*, M. A. Habib, L.L. Lebel, T. A. Denidni, D. Therriault and M. A. El Khakani "Electromagnetic shielding properties of excimer-laser-synthesized-SWCNT/polyurethane nanocomposite films" Oral presentation at the EMC'2009, June 24-26, Nanotubes and Nanowires Symposium. University park, Pennsylvania, USA. **2009**.

C26- L.L. Lebel*, **B. Aïssa**, MA El Khakani and D. Therriault "Direct 3D microfabrication process" Oral presentation at the TechConnect Summit 2009. George R. Brown convention center. Houston, Texas. May 2-9, **2009**.

C25- B. Aïssa* et M. A. El Khakani "Caractérisation des nanotubes de carbone monoparoie "suspendus" synthétisés par plasma d'ablation laser et leur intégration directe en dispositifs type Transistors à effet de champ" Oral presentation at the Colloque Plasma Québec. University of Montreal, May 25-26, Canada, **2009**.

C24- V. Le Borgne*, **B. Aïssa**, C. Fauteux, M. A. El Khakani C. Scilletta, M. Scarselli, P. Castrucci and M. De Crescenzi "Synthèse de NTCM par ablation laser pour des applications photovoltaïques" Oral presentation at the Colloque Plasma Québec. University of Montreal, May 25-26, Canada, **2009**.

C23- L.L. Lebel*, **B. Aïssa**, MA El Khakani and D. Therriault "Ultraviolet-Assisted Direct-Write Fabrication of Three-Dimensional Microstructures" Oral presentation at the MRS Spring'09. San Francisco, California, USA. April 13-17 **2009**.

C22- Z. Hamoudi*, **B. Aïssa**, M. A. El Khakani and M. Mohamedi "Fundamental Studies of the Electronic Transfer Properties of Tailored Carbon Fibres Substrate as NPs Catalyst Support for Direct Methanol Fuel Cell Reactions", Oral presentation at the Solid-State Ionics Symposium. MRS Fall meeting, Boston, USA. December'4, **2008**.

C21- Z. Hamoudi*, **B. Aïssa**, M.A. El Khakani and M. Mohamedi "Preparation and characterization of Binderless Carbon Nanostructured Catalyst support for DMFC" Oral presentation at the 7th Inter. Symp. of New Nano Materials for Electrochemicals systems, Montreal, Canada. 24-27 June **2008**.

C20- B. Aïssa*, L.L. Lebel, D. Therriault et M A El Khakani “Synthèse contrôlée des nanotubes de carbone monoparoie par l’approche plasma/laser pour l’élaboration de nanocomposites NTC-Polymère” Oral presentation at the 76^e congrès de l'ACFAS-Centre des congrès, Quebec city, Canada. May 7-11, **2008**.

C19- B. Aïssa*, V. Le Borgne and M.A. El Khakani “Caractérisation des nanotubes de carbone monoparoie synthétisés par plasma d’ablation laser et leur intégration directe en dispositifs type Transistors à effet de champ” Oral presentation at the Colloque de Plasma Québec. University of Montreal, Montreal, Canada. May 22-23, **2008**.

C18- L.L. Lebel*, **B. Aïssa**, MA El Khakani and D. Therriault “Tridimensional Microstructures of C-SWCNT Reinforced Polymer Nanocomposite by Microfluidic Infiltration Approach” Oral presentation at the Fourth annual CREPEC Colloquium. Concordia University, Montreal, Canada. Dec. 10, **2008**.

C17- L.L. Lebel*, **B. Aïssa**, MA El Khakani and D. Therriault “Direct 3D microfabrication process” Oral presentation at the WBTshowcase’ 2008, Arlington, Booth 203, Texas, USA. March 26-27, **2008**.

C16- B. Aïssa, E. Champagne and M.A. El Khakani* “Directed Growth of Single-Wall Carbon Nanotube Bundles by Means of an “All-Laser” Processing for Nanoelectronic Device Applications” Oral presentation at TMS 2007, 136th Annual Meeting & Exhibition, Orlando, Florida, USA. 25 March **2007**.

C15- L.L. Lebel*, **B. Aïssa**, MA El Khakani, and D. Therriault “Three-Dimensional (3D) Microstructures of SWCNT-Polymer Nanocomposites by Means of UV-Assisted Direct-Writing” Oral presentation at the Simha Symposium on Polymer nanocomposites 2007. IMI, Boucherville, Quebec, Canada. October 17-18, **2007**.

C14- L.L. Lebel*, **B. Aïssa**, MA El Khakani and D. Therriault “Tridimensional Microstructures of SWCNT Reinforced Polymer Nanocomposite by Means of a Microfluidic Infiltration Approach”. Oral presentation at the MRS Fall meeting 2007, Symposium Nanophase and Nanocomposite Materials V, Hynes Convention Center Boston, USA. November 29, **2007**.

C13- B. Aïssa*, My Ali El Khakani “Synthèse contrôlée sur-substrat de CNT par laser et leur intégration directe en nanoélectronique” Oral presentation at the 75^e congrès de l'ACFAS- UQTR, Quebec, Canada. 7-11 May, **2007**.

C12- B. Aïssa*, Z. Hamoudi, H. Takahashi, K. Tohji, M. Mohamedi and M. A. El Khakani “Novel Free-Standing Carbon Nanotubes-based-Nanostructured Electrodes for Electrochemical Power Sources” Poster at Colloque Nano-Québec –Nano2007- Montreal, Canada. 7 February, **2007**.

C11- L.L. Lebel*, **B. Aïssa**, M.A.E. Khakani, D. Therriault, “Three-Dimensional Microstructures of SWCNT-Polymer Nanocomposites by a Microfluidic Infiltration Approach”, Oral presentation at the Fifth annual CREPEC meeting, Montreal, Canada. Nov 26, **2009**.

C10- B. Aïssa*, J.-H. Yi and M.A. El Khakani “Ultra-high oxidation resistance of SWNTs grown by laser ablation” Poster at the Chemontube’06, Arcachon, France, April, **2006**.

C9- B. Aïssa*, J.-H. Yi et M.A. El Khakani, “Utilisation du plasma d’ablation laser pour la synthèse et l’intégration directe de nanotubes de carbone monoparoie pour des dispositifs

nanoélectronique” Poster at the 74^e congrès de l'ACFAS. McGill University, Montreal, Canada. 15-19 May, **2006**.

C8- B. Aïssa*, M.A. El Khakani and J.-H. Yi “Localized Single wall carbon nanotube bundles synthesis by means of an “all-laser” growth process and their direct integration for nanoelectronic applications” Poster at the Alternative micro- and nano fabrication 2005, IMI, Boucherville, Quebec. Canada. July 7-8, **2005**.

C7- B. Aïssa, J.-H. Yi and M.A. El Khakani* “Localized growth of single wall carbon nanotubes on various substrates by means of an “all-laser” process and their direct integration for nanoelectronic applications”, Oral presentation at the Diamond 2005, Toulouse, France. 11-16 Sep. **2005**.

C6- M.A. El Khakani*, **B. Aïssa** and J.-H. Yi “Localized growth of suspended SWNTs by means of an “all-laser” process and their direct integration into nanoelectronic devices” Oral presentation at the 2nd-Nanoscale devices and system integration Conference, Houston, Texas, USA. 4-6 April, **2005**.

C5- M.A. El Khakani*, **B. Aïssa** and J.-H. Yi “Controlled growth of SWNT-bundles on various substrates by means of an “all-laser” process and their direct integration for nanoelectronic applications”, Poster at the Premier atelier Canadian sur le nanocarbone. University of Montreal. Montreal, Canada. Nov. 15. **2005**.

C4- M.A. El Khakani*, **B. Aïssa** and J.-H. Yi “SWNTs bundle synthesis by means of an all-laser growth process and their integration for nanoelectronic applications”, Oral presentation at the Nanotech'04, Nantes, France. Oct. **2004**.

C3- B. Aïssa*, J.-H. Yi and M.A. El Khakani “Localized laser growth of random networks of single wall carbon nanotube bundles and their integration for nanoelectronic devices”, Poster at the 17^{ème} Entretiens Jacques Cartier. Colloque : Nanotechnologie : Technologies de nanofabrication et nanodispositifs pour l'électronique et la photonique. Montreal, Quebec, Canada. 9 Oct. **2004**.

C2- J.-H. Yi*, **B. Aïssa** et M.A. El Khakani, “Croissance localisée, nanostructure et propriétés électriques des réseaux des liasses de nanotubes de carbone monoparoie”, Oral presentation at the the 72^e congrès de l'ACFAS, University of Montreal. Quebec, Canada. 7 May **2004**.

C1- B. Aïssa*, J.H. Yi and M.A. El Khakani “Laser ablation based synthesis and electrical properties of single wall carbon nanotube bundle networks”. Poster at the Atelier NanoQuébec 2004 en nanosciences et nanotechnologies, Centre Mont-Royal. Montréal, Quebec, Canada. Oct. **2004**.

4.2 Invited Talks:

1. B. Aïssa “ Electromagnetic absorbance capacity of N-doped single wall carbon nanotubes in the extremely high frequency band” Invited talk at session nanomaterials and nanotechnology (materials and processes)-related RF/microwave/electromagnetic devices and circuits at the IEEE MTT-S International Microwave Workshop Series (IMWS) on Advanced Materials and Processes (AMP)- be held next September 20-22 in Pavia, Italy. **Not funded**.
2. B. Aïssa, as a *keynote speaker* “Nanotubes for electronics” University of Oum el Bouaghi, Algeria, May 25-26, 2014. **Funded**.
3. B. Aïssa “Carbonaceous nanomaterials for electronics” QEERI, Doha, Jan. 30, 2014. **Funded**.

4. B. Aïssa, *as a keynote speaker*, “Laser grown SWCNT for field effect transistor devices” University of Oum el Bouaghi, Algeria, June 1, 2013. **Funded.**
5. B. Aïssa “UV-assisted direct-writing fabrication of carbon nanotube/polyurethane nanocomposite beams based field effect transistors by means of microfluidic infiltration approach”. International Workshop on Beam Injection Assessment of Microstructure in Semiconductors- BIAMS’11, Annaba, (Algeria) 25-28 June 2012. **Funded.**
6. B. Aïssa, *as a keynote speaker*, “A review of photovoltaic Solar Cells: Majors advances and Outlooks”. Symposium on Applications of Nanotechnology in Solar Energy of the YUC fair. Organized by Yanbu University College, KSA, May 14-16, 2012. **Funded.**
7. B. Aïssa, *as a keynote speaker*, “Toward Solar Cells based carbon nanotube Nanomaterials”. Symposium on Applications of Nanotechnology in Solar Energy of the YUC fair. Organized by Yanbu University College, KSA, May 14-16, 2012. **Funded.**
8. B. Aïssa “Laser based CNT growth for electronic applications” Khalifa University of Science and Technology and Research, Abu Dhabi. UAE. June 5, 2011. **Funded.**
9. B. Aïssa “Carbon nanotubes for electronics and opto-electronic applications: Major advances and challenges”. First meeting with Algerians Researchers established abroad. Cercle Militaire de l’Armée, Algiers, Algeria, 3-5 Nov. 2009. **Funded.**
10. B. Aïssa, M. Nedil, and F. Rosei “Structural correlation with optoelectronic properties of carbon nanomaterials-based photovoltaic devices” Aug. 22-25, Advanced Materials World Congress, Stockholm, Sweden, Aug. 22-26, 2015. **Funded.**
11. B. Aïssa, M. Nedil, F. Rosei and E. Haddad” Self-healing materials based Carbon Nanotubes nanocomposite for space applications” BITs 1st world congress of smart materials -2015. Smart Nanotube and Nanowire Session. Republic of Korea. Busan, March 22-26, 2015. **Funded.**
12. J. P. Seif,..., B. Aïssa et al. « Crystalline Silicon Solar Cells: Temperature Dependencies and Impact of Device Architecture” Oral presentation at 6th SiliconPV, Chambéry, France, March 2016. Speaker J.P. Seif. **Not funded.**
13. J. P. Seif,..., B. Aïssa et al. “Impact of Solar Cell Architecture on the Temperature Dependency of its Characteristics” Wafer-Based Silicon Solar Cell and Materials Technology- Silicon Solar Cell Characterisation and Modelling, 2016 EU-PVSEC Conference, 20-24 June 2016, Munich, Germany. Speaker J.P. Seif. **Not funded.**

5- Distinctions, Awards and Credentials

5.1 Research awards:

- 1- Laureate of the “Networking/Partnering Initiative” Award from the European Space agency (NPI-ESA), May 2013. (90 000 Euros-2013).
- 2- Laureate of the Australian Endeavour Research Fellowship Award from the Australian Government, Dec. 2013. (23,500 \$)
- 3- Natural Sciences and Engineering Research Council of Canada (NSERC) - Industrial R&D Fellowship (Postdoctoral scholarship) (60 000 CAD\$-2010/2012). Funding source: NSERC.
- 4- Student’s best presentation award, EMC’2009 conference. Pennsylvania, USA (333 US\$, June 24, 2009).

- 5- NSERC-INRS*** award for research diffusion (3200 CAD\$, May. 2009).
- 6- NSERC-INRS award for research diffusion (3800 CAD\$, Nov. 2005).
- 7- Master's symposium best presentation award, INRS-EMT, (500 CAD\$, Varennes, Canada April 2005).
- 8- INRS scholarship for Ph.D. Program (18600 CAD\$/Year, 9/2005-12/2009). Funding source: Institut National de la recherche scientifique.
- 9- INRS scholarship for Master's Program. (13900 CAD\$/year, 1/2004-8/2005). Funding source: Institut National de la recherche scientifique.
- 10- Scholarship of Italian foreign office. (3900 Euros, Roma, Italy. 11/2007-12/2007). (Photocurrent generation in the carbon nanostructures).

5.2 Distinction:

- 11-Young Investigator Award, QEERI-Qatar Foundation, Doha, Qatar, 2015.
- 12-Winner of the prize "Réussite Exceptionnelle" from the Fondation Club Avenir, Montreal, Canada, Nov. 2015.
- 13-Top Prize of the best Ph.D. achievements, INRS-EMT, Varennes, Quebec, Canada (Oct. 2010).
- 14-Top Prize of the best MSc seminar, INRS-EMT, Varennes, Quebec, Canada (April. 2005).
- 15- Ph.D. work selected in the best TOP-10 (2008-2009) scientific discovery in Quebec by the magazine Quebec Science.
- 16-Ranked top first during the national exams for access to graduated studies (Algiers, 2000).
- 17-Subject of biographical record in International Who's Who Historical Society in the World 2010, USA. (Nov. 2010), and Who's Who professionals in the world (2011-2012, Oct. 2011, USA).
- 18-Patent selected in World Best Technologies (WBT showcase'2008, Arlington, Texas, 26-27 March) and TechConnect Summit 2009 (Houston, Texas. May 2-9, 2009).
- 19-Congratulation attestation from for the president of *Fonds de Recherche sur la nature et les technologies*, for the whole Ph.D. achievements.
- 20-Australian Minister for Education Congratulations Letter for the Endeavour Award. Dec. 2013.
- 21-Best Engineer's project, USTHB, Algiers, Algeria (Sept. 1998).
- 22-Samples prototype saved at Canada Science & Technology Museum in Ottawa.
- 23-Chairman of the UNESCO MATECSS' workshop, session: Functional Nanomaterials for energy applications.

5.3 Credential:

- 24-Elected Senior-Fellow of the UNESCO-UNISA Chair in Nanoscience and nanotechnology (South Africa, May 2015).
- 25- Elected Senior-Fellow of the African Network in Nanoscience and Nanotechnology (South Africa, May 2015).
- 26-Elected Fellow of the UNESCO-MATECCS chair in Materials and technologies for Energy Conversion, Saving and Storage (Canada, October 2015).
- 27-Editor-in-chief of the smart materials and coatings technology Journal (Research-Publisher, CA, USA).
- 28-Editor in Frontiers in materials (Nature Publishing Group), smart materials topic.
- 29-Editor in Journal of Composites and Biodegradable Polymers.
- 30-Editor in Journal of Environmental Science and Engineering Technology.
- 31-Editor in Journal of New Technology and Materials JNTM.
- 32-Editor in Nano Research & Applications (IMedPub journals group, Dec. 2015).
- 33-Elected full member of the Sigma Xi, the scientific research society (July 2012). Re-elected on November 2014.
- 34-Member of the ACS, IEEE, APS and RSC society of knowledge.

** : Natural Sciences and Engineering Research Council of Canada. Canada.

*** : National Institute of Scientific Researches. Quebec. Canada.

* : École Nationale d'ingénieurs et de Techniciens Algériens. Algiers, Algeria.

† : Université des sciences et de la Technologie Houari Boumediene. Algiers, Algeria.

6. Funding:

I have contributed to write and submit to date the following 14 proposals:

- (i) NPRP Project No: 8-086-1-017 "Hybrid quantum dot perovskite solar cells", Awarded on 2015 (810 k US \$) and starting officially on July 18, 2016.
- (ii) Novel nanocomposite based self healing material and carbon nanotubes processes. With MPB Technologies Inc. and INRS-EMT, Quebec, as NSERC-CRD grant. **243 k\$. Successful.**
- (iii) Hybrid Organic Photovoltaic based on Carbon nanotubes and conjugated polymers composite. With Raymor Ind. and INRS-EMT, Varennes, Quebec, as NSERC/Prompt/CIP-CRD grant: **360 k\$. Successful.**
- (iv) Développement de cellules solaire organiques hybrides à base de nanomatériaux carbonés et polymères photoactif. Passeport Innovation grant. With Raymor Ind. and INRS-EMT, Varennes, Quebec, **130 k\$. Successful.**

- (v) Élaboration de nouveaux matériaux composites auto-réparateurs à base de nanotube de carbone pour des applications spatiales. Passeport Innovation grant. With MPB Technologies Inc. and INRS-EMT, Quebec, **158 k\$**. **Successful**.
- (vi) Investigation of Self-healing nanocomposite materials for underground applications. With UQAT, Quebec, and MPB Technologies Inc. as an Engage-NSERC-grant: **25 k\$**. **Successful**.
- (vii) Ruthenium Grubbs Catalyst for high performance self-healing composite structures. With Prof. F. Rosei (INRS-EMT, Varennes, Quebec), as an Engage-NSERC-grant: **25 k\$**. **Successful**.
- (viii) Fabrication of self healed and highly flexible patch antennas based fluid metal alloy for space applications. With Prof. M. Nedil (UQAT, Quebec), as an Engage NSERC-grant: **25 k\$**. **Successful**.
- (ix) Modeling and fabrication of metallic thermal protection systems (MTPS) for FBG sensors based spacecraft vehicles. With Prof. M.C.E. Yagoub (University of Ottawa, Canada), as an Engage NSERC-grant: **25 k\$**. **Successful**.
- (x) Moon Dust Microscopy and Chemistry MDMC (Dust Microscopy and Chemistry Package for Lunar Exploration L-DAP Definition). With MPB Inc., submitted to European Space Agency: **298 kEuros**. **Successful**.
- (xi) Compact Reconnaissance Imaging Deyson Spectrometer for Mars With MPB Inc., submitted to European Space Agency: **2 M Euros**. **Successful**.
- (xii) Development of germanium fiber Bragg gratings and Er-doped fiber amplifiers for operation in harsh environments With MPB Inc., submitted to European Space Agency: **250 k Euros**. **Successful**.
- (xiii) RFID based carbonaceous Nanomaterials for mine environment applications. With Prof. F. Erchiqui, (UQAT, Quebec), as an Engage NSERC-grant: **25 k\$**. **Successful**.
- (xiv) Nanowire perovskite oxides-based energy harvesting for autonomous wireless sensors and aerospace applications. With Prof. F. Rosei (INRS-EMT, Varennes, Quebec), as a Strategic-NSERC-grant: **430 k\$** (**In progress**).
- (xv) Development of germanium fiber Bragg gratings and Er-doped fiber amplifiers for operation in harsh environments. With Prof. F. Rosei (INRS-EMT, Varennes, Quebec), as a Strategic-NSERC-grant: **585 k\$**. **Successful**.
- (xvi) Development of RFID/MIMO gas sensors integrating carbon nanotubes and graphene for underground mine applications. With Prof. M. Nedil (UQAT, Quebec), as a Strategic-NSERC-grant: **759 k\$,** (**In progress**).

(xvii) Development of RFID/MIMO gas sensors integrating carbon nanotubes and graphene for underground mine applications. With Prof. M. Nedil (UQAT, Quebec), as a CRD-NSERC-Prompt-grant: **750 k\$**. **Successful**.

(xviii) Quantum dots perovskite for PV application, QEERI, HBKU, Qatar Foundation, **900 k US\$**. **Successful**.

7. Active national and international collaborations:

1-National Aeronautics and Space Administration (NASA, USA).

2-Canadian Space Agency (CSA, Canada).

3-European Space Agency (ESA, Nederland).

4-Algerian Space Agency (ASA, Algeria).

5-Graduate School of Environmental Studies, Tohoku University (Japan).

6-Roma Tor Vergata University. Department of physics. Italy.

7-Micro and nanotechnologies Innovation campus (MINATEC, Grenoble, France).

8-University of Ottawa. School of Information Technology and Engineering (SITE, ON, Canada).

9-University of Quebec in Abitibi-Témiscamingue (Lab. of Underground communications). Qc., Canada.

10-Institut National de la Recherche Scientifique. INRS-ÉMT. NanoFemtoLab, (Varenes, Qc., Canada).

11-University of Concordia. Department of mechanical and industrial engineering Montreal, Qc. Canada.

12-University McGill. Department of Mechanical Engineering Montreal, Qc. Canada).

13-École polytechnic de Montreal. Mechanical Multiscale Laboratory (Lm². Montreal, Qc. Canada).

14-Shinshu University. Faculty of Engineering, (Japan).

15-King Abdullah University of Science and Technology (KAUST). Kingdom of Saudi Arabia.

16-King Fahd University of Petroleum and Minerals (KFUPM). Physics Dep. Kingdom of Saudi Arabia.

17-Raymor Industries Inc. Canada.

18-Umm El Qura University. Kingdom of Saudi Arabia.

19- Queensland University. Australia.

- 20-QEERI, Qatar Foundation, Doha, **Qatar**.
- 21- University of Pretoria and IThemba Labs (**South Africa**).
- 22- Adhesive Bonding Technology | Adhesive Bonding in Construction Fraunhofer-Institut für Fertigungstechnik und Angewandte Materialforschung IFAM (**Germany**).
- 23- Georgia Institute of technology, Georgia, **USA**

8. Other scientific and Social Activities

- Elected chairman of the
- Elected full member of the Sigma Xi, the scientific research society (July 2012). Re-elected on November 2014.
- Member of the Royal Society of Chemistry.
- Member of the American Physical Society.
- Editor-in-chief of the smart materials and coatings technology Journal (Research-Publisher, CA, USA).
- Editor in Frontiers in materials (Nature Publishing Group), smart materials topic.
- Editor in Journal of Composites and Biodegradable Polymers.
- Editor in Journal of Environmental Science and Engineering Technology.
- Editor in Journal of New Technology and Materials JNTM.
- Member of Plasma-Quebec and Nano-Quebec Canadian networks (within MPB).
- Member of CREPEC (Centre de recherche en plasturgie et composite. Canada)
- Member of the CIP (within MPB).
- Member of MICRONET (Canadian excellence-network in microelectronic).
- Member of SCM (Canadian Microscopy Society).
- Member of the American Chemical Society.
- Member of IEEE society.
- Member of ACFAS (French Canadian association for Science).
- Regular Reviewer for 35 Journals, including: Nanoscale (RCS), Applied physics Letters (APS). Journal of Applied physics (APS). Nanotechnology (IOP). Journal of materials chemistry C (RSC). Carbon (Elsevier). Journal of Micromech. Microeng (IOP)...
- Member of Algerian Inventors association.
- Member of the Algerian competences association.
- Regular contribution in the *métro* newspaper (Montreal, Canada. 58 articles to date).
- Regular contribution in online encyclopedia Wikipedia.

- Member of the *Fondation Québécoise de la déficience intellectuelle*, and the Multiple Sclerosis Society of Canada.
- Member of ASTROLABE association (Canada).
- INRS representative for carriers' days (2005-2009).

9. Medias

1. My work on the self-healing materials for space applications was the subject of a Canadian television show of CBC (Canadian Broadcasting channel). TV-Program: « *Découverte* », diffused on Jan 22, 2011 at 6 pm.
2. A part of my Ph.D. work was selected in the best TOP-10 (2008-2009) scientific contribution in Canada by the magazine Quebec Science (edition of Feb. 2010).
3. The same work was also the subject of two television shows:
 TV-Program « *le Lab* » in Canal Vox channel. See:
<http://www.voxtv.info/lalab/archives.html>, diffused on Feb. 8, 2010.
 TV-Program « *le Code Chastenay* », in Quebec-Tele channel; diffused on Oct. 5, 2010 at 7 pm.
4. Some of our samples prototypes were selected in the collection des sciences physiques in the Canadian Museum of science and technology.
5. Part of my PhD work was published in vulgarisation magazine: Micro manufacturing magazine: “**A new twist in free-form fabrication**”, Vol. 3, Issue 1. February 2010.pp 15-16.
6. Part of my work published originally in “Advanced materials Volume 22, Issue 5, 592-596, (2010)” has been also selected to be published for the November 9, 2009 Chemistry World Magazine. See:
<http://www.rsc.org/chemistryworld/News/2009/November/09110901.asp>
7. Part of my work was also selected to be published in MRS (Material Research Society) Newsletter. See
http://www.mrs.org/s_mrs/sec.asp?CID=1920&DID=84063
8. Part of my work was published in « *L'avantage* »: public newspaper from Rimouski city, Quebec, Canada, and « *Nord-Est* »: public newspaper from Sept-îles city, Quebec, Canada, (edition of Jan. 20, 2010).
9. Parts of my works were selected in many websites, see e.g.:
 - <http://www.nouvelles.umontreal.ca/recherche/sciences-technologies/decouverte-s-de-lannee-ludem-et-lecole-polytechnique-a-lhonneur.html>
 - www.polymtl.ca
 - www.polymtl.ca/lm2
 - Forum of University of Montreal.

–For details on our developed method, please see:

http://www.youtube.com/watch?v=D-n_u0rxQeU

10. Part of my work published originally in “Applied physics letters, 95, 083114 (2009)” has been also selected to be published for the issue of Virtual Journal of Nanoscale Science & Technology, September 7, 2009.