Prof. Badreddine ASSOUAR
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CURRENT PROFESSIONAL POSITION

Director of Research at CNRS - University of Lorraine, France
Director of LABCOM MOLIERE (Academic – Industrial Joint Lab)
Founder and Leader of "Acoustic Metamaterials" group at the University of Lorraine

PREVIOUS POSITIONS

2012-2020: Professor at National Center of Scientific Research (CNRS)
2010-2012: Visiting Professor at Georgia Institute of Technology, at the International Joint Laboratory, GIT – CNRS, Atlanta, USA
2006-2010: Research Scientist at CNRS (1st class) in Nancy University
2002-2006 : Research Scientist at CNRS (2nd class) in Nancy University
2001-2002 : Assistant Professor in Nancy University
1998-2001 : Lecturer in Nancy University

ACADEMIC DEGREES

2007 : HDR "Habilitation to Supervise Research" degree, Nancy University, France
2001 : Ph.D in Materials Physics, Nancy University, France
1998 : M. Sc in Plasmas, Optics and Electronics, Nancy University, France

MAIN DISTINCTIONS

2024: Fellow of the European Academy of Sciences
2023: World's Top 2% Scientists by Stanford University
2019 to present: Associate Editor with Physical Review Applied.
2022 to present: Member of the TPC of IEEE IUS (Group 3)
2017 to 2022: Associate Editor of Journal of the Acoustical Society of America.
2017: Guest Editor of SI on "Acoustic Metamaterials & Metasurfaces" in J. Appl. Phys.
2016 to 2019: Member of the Editorial Advisory Board of the J. Appl. Phys.
2014 to 2018: Member of the Editorial Board of "Scientific Reports".
2014 to present: Panelist at the National Science Foundation (USA) and ERC (Europe).
2008: Award of the best researcher in the "Region Lorraine", France.

RESEARCH FIELDS

Acoustic and Elastic Metamaterials and Metasurfaces; Phononic and Photonic Crystals; SAW devices; wave propagation in artificial materials.

MAIN RECENT ORGANIZATION of CONFERENCES and WORSHOPS

2022: General Chair of the "*Phononics 2022*" Conference, June 2022, Marrakech, Morocco.

2017: Representative of Europe in the Technical Committee of the International Congress on Ultrasonics (ICU 2017), Honolulu - USA, 2017.

2012-2015: Member of the technical and organization committees of International Congress of Ultrasonics (ICU 2015).

2014 to present: Member of the Scientific Advisory Board of "Phononics" conference.

Selected Publications (> 9000 citations from a total of >150 papers; h-index = 53)

1. M. B. Assouar, B. Liang, Y. Wu, Y. Li, J-C. Cheng & Y. Jing. *"Acoustic Metasurfaces"*. Nature Reviews Materials 3, (2018) 460. (ESI Highly cited paper).

2. L. Cao, S. Wan, Y. Zeng, Y. Zhu & **M. B. Assouar** *"Observation of Phononic Skyrmions based on Hybrid Spin of Elastic Waves"*. Science Advances 9, eadf3652 (2023).

3. Y. Zhu, L. Cao, A. Merkel, S-W. Fan, B. Vincent & **M. B. Assouar**. *"Janus acoustic metascreen with nonreciprocal and reconfigurable phase modulations"*. Nature Communications 12 (2021) 7089.

4. Y. Li & **M. B. Assouar**. *"Acoustic metasurface-based perfect absorber with deep subwavelength thickness"*. Appl. Phys. Lett., 108 (2016) 063502. Highlighted by AIP, Phys.org, ScienceDaily, ... (ESI Highly cited paper).

5. Y. Zhu, N. Gerard, X. Xia, G. Stevenson, L. Cao, S. Fan, C. Spadaccini, Y. Jing and **M. B. Assouar**. "*Systematic Design and Experimental Demonstration of Transmission-Type Multiplexed Acoustic Metaholograms*". Advanced Functional Materials 2101947 (2021).

6. X. Fan, Y. Zhu, X. Huang, C. Li, C. Weng, H. Zhang, B. Liang & **M. B. Assouar**. «Ultrabroadband and Reconfigurable Transmissive Acoustic Metascreen" Advanced Functional Materials 2300752 (2023).

7. Y. Zhu, A. Merkel, K. Donda, S. Fan, L. Cao & **M. B. Assouar**. "Nonlocal acoustic metasurface for ultrabroadband sound absorption". Phys. Rev. B 103 (2021) 064102.

8. S. Fan, S-D. Zhao, L. Cao, Y. Zhu, Y-F. Wang, K. Donda, Y-S. Wang & **M. B. Assouar**. "Reconfigurable curved metasurface for acoustic cloaking and illusion". Phys. Rev. B 101, (2020) 024104.

9. L. Cao, Z. Yang, Y. Xu, S. Fan, Y. Zhu, Z. Chen, B. Vincent & **M. B. Assouar**. "Disordered Elastic Metasurfaces". Phys. Rev. Applied 13, (2020) 014054.

10. Z. Hou, X. Fang, Yi. Li & **M. B. Assouar**. "Highly Efficient Acoustic Metagrating with Strongly Coupled Surface Grooves". Phys. Rev. Applied 12, (2019) 034021. Editors' Suggestion.

11. Y. Zhu & **M. B. Assouar**. "Systematic design of multiplexed-acoustic-metasurface hologram with simultaneous amplitude and phase modulations". Phys. Rev. Materials 3, (2019) 045201.

12. S. Qi, Y. Li & **M. B. Assouar**. "Acoustic focusing and energy confinement based on multilateral metasurfaces". Phys. Rev. Applied, 7 (2017) 054006. Highlighted by PhysicsBuzz and PhysicsCentral.

Publications

International Publications in Peer-Reviewed Journals

P147. M. P. Abrahams, M. Oudich, Y. Revalor, N. Vukadinovic, and **M. B. Assouar**. "*Hybrid ultrathin metasurface for broadband sound absorption*". Applied Physics Letters 124, 151702 (2024).

P146. T. Guo, **M. B. Assouar**, B. Vincent & A. Merkel
« Edge states in non-Hermitian composite acoustic Su Schrieffer Heeger chains »
Journal of Applied Physics 135, 043102 (2024)

P145. W. Ding, T. Chen, D. Yu, C. Chen, R. Zhang, J. Zhu, **M. B. Assouar**
"Isotacticity in chiral phononic crystals for low-frequency bandgap"
International Journal of Mechanical Sciences 261, 108678 (2024).

P144. L. Cao, S. Wan, Y. Zeng, Y. Zhu & **M. B. Assouar**
"Observation of Phononic Skyrmions based on Hybrid Spin of Elastic Waves"
Science Advances 9, eadf3652 (2023)

P143. X. Fan, Y. Zhu, N. Li, C. Weng & **M. B. Assouar**
"Acoustic metaholograms for encrypted information transmission"
Physical Review Applied 20, 044048 (2023)

P142. M. Jiang, Y-F. Wang, **M. B. Assouar** & Y-S. Wang
"Scattering-free modulation of elastic shear-horizontal waves based on interface-impedance theory"
Physical Review Applied 20, 054020 (2023)

P141. W. Ding, T. Chen, C. Chen, D. Chronopoulos, **M. B. Assouar**, Y. Wen, J. Zhu
"Description of Bandgaps Opening in Chiral Phononic Crystals by Analogy with Thomson scattering"
New Journal of Physics 25, 103001 (2023)

P140. X-R. Li, J-J. Feng, B-C. Ping, Y. Sun, D-J. Wu & **M. B. Assouar**
"Periodic-Phase Acoustic Vortices with Tunable Comblike Orbital Angular Momentum Spectrum"
Physical Review Applied 20, 034008 (2023)

P139. Y. Zhu, A. Merkel, L. Cao, Y. Zeng, S. Wan, T. Guo, Z. Su, S. Gao, H. Zeng, H. Zhang and **M. B. Assouar**
"Experimental observation of super-Klein tunneling in phononic crystals"
Applied Physics Letters 122, 211701 (2023)

P138. Z-L. Xu, D-F. Wang, Y-F. Shi, Z-H. Qian, **M. B. Assouar**, K-C. Chuang
"Arbitrary wavefront modulation utilizing an aperiodic elastic metasurface"
International Journal of Mechanical Sciences 255, 108460 (2023)

P137. X. Fan, Y. Zhu, Z. Su, X. Huang, Y. Kang, H. Zhang, W. Kan & **M. B. Assouar**
« Transverse Particle Trapping Using Finite Bessel Beams based on Acoustic Metamaterials"

Physical Review Applied 19, 034032 (2023)

P136. X. Fan, Y. Zhu, X. Huang, C. Li, C. Weng, H. Zhang, B. Liang & **M. B. Assouar**.
« Ultrabroadband and Reconfigurable Transmissive Acoustic Metascreen"
Advanced Functional Materials 2300752 (2023).

P135. W. Ding, T. Chen, C. Chen, D. Chronopoulos, J. Zhu and **M. B. Assouar**.
"Thomson scattering-induced bandgap in planar chiral phononic crystals".
Mechanical Systems and Signal Processing 186 (2023) 109922

P134. L. Cao, Y. Zhu, S. Wan, Y. Zeng, **M. B. Assouar**.
"On the Design of Non-Hermitian Elastic Metamaterial for Broadband Perfect Absorbers".
International Journal of Engineering Science 181 (2022) 103763.

P133. K. Donda, Y. Zhu, A. Merkel, S. Wan and **M. B. Assouar**.
"Deep Learning Approach for Designing Acoustic Absorbing Metasurfaces with High Degrees of Freedom"
Extreme Mechanics Letters, 56 (2022) 101879.

P132. Y. Zeng, L. Cao, S. Wan, T. Guo, S. An, Y-F. Wang, Q-J. Du, B. Vincent, Y-S. Wang and **M. B. Assouar**.
"Inertially amplified seismic metamaterial with an ultra-low-frequency bandgap".
Applied Physics Letters 121 (2022) 081701.

P131. S. Wan, L. Cao, Y. Zeng, T. Guo, M. Oudich and **M. B. Assouar**.
"Low-frequency nonreciprocal flexural wave propagation via compact cascaded time-modulated resonators"
Applied Physics Letters 120 (2022) 231701.

P130. S. Yuan, A-Li Chen, X-Y. Du, H-W. Zhang, **M. B. Assouar**, Y-S. Wang.
"Reconfigurable flexural waves manipulation by broadband elastic metasurface"
Mechanical Systems and Signal Processing 179 (2022) 109371.

P129. Y. Zeng, L. Cao, S. Wan, T. Guo, Y-F. Wang, Q-J Du, **M. B. Assouar** and Y-S. Wang.
"Seismic metamaterials: Generating low-frequency bandgaps induced by inertial amplification"
International Journal of Mechanical Sciences 221 (2022) 107224.

P128. Y. Zhu, L. Cao, A. Merkel, S-W. Fan, B. Vincent & **M. B. Assouar**
« *Janus acoustic metascreen with nonreciprocal and reconfigurable phase modulations*"
Nature Communications 12 (2021) 7089.

P127. Y. Zhu, N. Gerard, X. Xia, G. Stevenson, L. Cao, S. Fan, C. Spadaccini, Y. Jing and **M. B. Assouar**.
"Systematic Design and Experimental Demonstration of Transmission-Type Multiplexed Acoustic Metaholograms"
Advanced Functional Materials 31 (2021) 2101947.

P126. S. Wan, L. Cao, Y. Zhu, M. Oudich and **M. B. Assouar**.
"Nonreciprocal Sound Propagation via Cascaded Time-Modulated Slab Resonators"
Phys. Rev. Applied 16 (2021) 064061.

P125. L. Shen, Y. Zhu, F. Mao, S. Gao, Z. Su, Z. Luo, H. Zhang and **M. B. Assouar**.
"Broadband Low-Frequency Acoustic Metamuffler"
Phys. Rev. Applied 16 (2021) 064057.

P124. Y. Zeng, S-Y. H-T. Zhou, Y-F. Wang, L. Cao, Y. Zhu, Q-J. Du, **M. B. Assouar** and Y-S. Wang.
"Broadband inverted T-shaped seismic metamaterial"
Materials and Design 208 (2021) 109906.

P123. Y. Zeng, L. Cao, Y. Zhu, Y-F. Wang, Q-J. Du, Y-S. Wang and **M. B. Assouar**.
"Coupling the first and second attenuation zones in seismic metasurface"
Applied Physics Letters 119 (2021) 013501.

P122. K. Donda, Y. Zhu, A. Merkel, S. Fan, L. Cao, S. Wan, **M. B. Assouar**.
"Ultrathin Acoustic Absorbing Metasurface Based on Deep Learning Approach"
Smart Materials and Structures 30 (2021) 085003.

P121. L. Cao, Y. Zhu, S. Wan, Y. Zeng, Y. Li and **M. B. Assouar**.
"Perfect Absorption of Flexural Waves Induced by Bound State in the Continuum"
Extreme Mechanics Letters 47 (2021) 101364.

P120. L. Cao, Y. Zhu, Y. Xu. S. Wang, Z. Yang and **M. B. Assouar**.
"Elastic Bound State in the Continuum with Perfect Mode Conversion"
Journal of the Mechanics and Physics of Solids 154 (2021) 104502.

P119. Y. Zhu, A. Merkel, K. Donda, S. Fan, L. Cao & **M. B. Assouar**.
« *Nonlocal acoustic metasurface for ultrabroadband sound absorption*"
Phys. Rev. B 103 (2021) 064102.

P118. L. Cao, Z. Yang, Y. Xu, Z. Chen, Y. Zhu, S. Fan, K. Donda, B. Vincent and **M. B. Assouar**.
"*Pillared elastic metasurface with constructive interference for flexural wave manipulation*".
Mechanical Systems and Signal Processing 146, (2021) 107035.

P117. Y. Zhu, S. Fan, L. Cao, K. Donda, and **M. B. Assouar**.
"Acoustic meta-equalizer"
Phys. Rev. Applied 14, (2020) 014038.

P116. S-M. Yuan, A-Li Chen, L. Cao, H-W. Zhang, S. Fan, **M. B. Assouar** and Y-S Wang.
"*Tunable multifunctional fish-bone elastic metasurface for the wavefront manipulation of the transmitted in-plane waves*"
Journal of Applied Physics 128, (2020) 224502.

P115. S. Fan, Y. Zhu, L. Cao, Y-F. Wang, A-L. Chen, A. Merkel, Y-S. Wang & **M. B. Assouar**.
"Broadband tunable lossy metasurface with independent amplitude and phase modulations for acoustic holography"
Smart Materials and Structures 29, (2020) 105038.

P114. S. Fan, Y-F. Wang, L. Cao, Y. Zhu, A-L. Chen, B. Vincent, **M. B. Assouar** and Yue-Sheng Wang.

"Acoustic vortices with high-order orbital angular momentum by a continuously tunable metasurface"
Appl. Phys. Lett. 116, (2020) 163504.
P113. Y. Zhu, L. Cao, A. Merkel, S. Fan and **M. B. Assouar**.
"Bifunctional superlens for simultaneous flexural and acoustic wave superfocusing"
Appl. Phys. Lett. 116, (2020) 253502.

P112. L. Cao, Z. Yang, Y. Xu, S. Fan, Y. Zhu, Z. Chen, Y. Li and **M. B. Assouar**.
"Flexural wave absorption by lossy gradient elastic metasurface"
Journal of the Mechanics and Physics of Solids 143, (2020) 104052.

P111. Y. Zeng, P. Peng, Q. Du, Y-S. Wang & **M. B. Assouar**.
« Subwavelength seismic metamaterial with an ultra-low frequency band gap ».
J. Appl. Phys. 128, (2020) 014901.

P110. S. Fan, S-D. Zhao, L. Cao, Y. Zhu, Y-F. Wang, K. Donda, Y-S. Wang & **M. B. Assouar**.
"*Reconfigurable curved metasurface for acoustic cloaking and illusion*". Phys. Rev. B 101, (2020) 024104.

P109. L. Cao, Z. Yang, Y. Xu, S. Fan, Y. Zhu, Z. Chen, B. Vincent & **M. B. Assouar**.
"*Disordered Elastic Metasurfaces*".
Phys. Rev. Applied 13, (2020) 014054.

P108. K. Donda, Y. Zhu, S. Fan, L. Cao, Y. Li and **M. B. Assouar**.
« Extreme low-frequency ultrathin acoustic absorbing metasurface »
Applied Physics Letters 115, (2019) 173506.

P107. Z. Hou, X. Fang, Yi. Li & **M. B. Assouar.**
« Highly Efficient Acoustic Metagrating with Strongly Coupled Surface Grooves ».
Phys. Rev. Applied 12, 034021 (2019). Editors' Suggestion.

P106. Y. Zhu, K. Donda, S. Fan, L. Cao, and **M. B. Assouar**.
"*Broadband ultra-thin acoustic metasurface absorber with coiled structure*"
Applied Physics Express 12, (2019) 114002.

P105. Y. Zhu, F. Fei, S. Fan, L. Cao, K. Donda & **M. B. Assouar**
« *Reconfigurable Origami-Inspired Metamaterials for Controllable Sound Manipulation*".
Phys. Rev. Applied 12, (2019) 034029.

P104. H. Ni, X. Fang, Z. Hou, Y. Li & **M. B. Assouar**.
"*High-efficiency anomalous splitter by acoustic meta-grating*".
Phys. Rev. B 100, (2019) 104104.

P103. Y. Xu, L. Cao , P. Peng, **M. B. Assouar** and Z. Yang.
"*Spatial waveguide mode separation for acoustic waves in a meta-slab composed of subunits with graded thicknesses*".
J. Appl. Phys. 126, (2019) 165110.

P102. Y. Xu, L. Cao, P. Pai, X. Zhou; **M. B. Assouar**, Z. Yang.
« Beam splitting of flexural waves with a coding meta-slab"
Applied Physics Express 12, (2019) 097002.

P101. Y. Zhu & **M. B. Assouar.**
« *Multifunctional acoustic metasurface based on an array of Helmholtz resonators*"
Phys. Rev. B, 99 (2019) 174109.

P100. Y. Zhu & **M. B. Assouar**
« *Systematic design of multiplexed-acoustic-metasurface hologram with simultaneous amplitude and phase modulations* ».
Phys. Rev. Materials, 3 (2019) 045201.

P99. S. Fan, S-D. Zhao, A-Li Chen, Y-F. Wang, Y-S. Wang & **M. B. Assouar**. "*Tunable Broadband Reflective Acoustic Metasurface*".
Phys. Rev. Applied 11 (2019) 043048.

P98. S. Huang, X. Fang, X. Wang, **M. B. Assouar**, Q. Cheng and Y. Li. "*Acoustic perfect absorbers via Helmholtz resonators with embedded apertures*".
Journal of the Acoustical Society of America, 145 (2019) 254.

P97. **M. B. Assouar**, B. Liang, Y. Wu, Y. Li, J-C. Cheng & Y. Jing.
"Acoustic Metasurfaces".
Nature Reviews Materials 3, (2018) 460. ESI Hot paper.

P96. S. Huang, X. Fang, X. Wang, **M. B. Assouar**, Q. Cheng and Y. Li. "*Acoustic perfect absorbers via spiral metasurfaces with embedded apertures*".
Appl. Phys. Lett. 113 (2018) 233501.

P95. Z. Hou, H. Ni & **M. B. Assouar**.
« PT-Symmetry for Elastic Negative Refraction"
Phys. Rev. Applied 10 (2018) 044071.

P94. L. Cao, Y. Xu, **M. B. Assouar** & Z. Yang.
« Asymmetric flexural wave transmission based on dual-layer elastic gradient metasurfaces"
Appl. Phys. Lett. 113, (2018) 183506.

P93. S. Qi & **M. B. Assouar**.
« *Ultrathin acoustic metasurfaces for reflective wave focusing*"
Journal of Applied Physics, 123 (2018) 234501.

P92. L. Cao, Z. Yang, Y. Xu & **M. B. Assouar**.
« *Deflecting flexural wave with high transmission by using pillared elastic metasurface*".
Smart Materials and Structures, 27 (2018) 075051.

P90. Z. Hou & **M. B. Assouar**.
« Tunable elastic Parity-Time symmetric structure based on the shunted piezoelectric materials"
Journal of Applied Physics, 123 (2018) 085101.

P89. **M. B. Assouar**.
« Preface to Special Topic : Acoustic Metamaterials and Metasurfaces".
Journal of Applied Physics, 123 (2018) 091601.

P88. S. Qi & **M. B. Assouar**.
« Acoustic energy harvesting based on multilateral metasurfaces"

Appl. Phys. Lett., 111 (2017) 243506.

P87. J-H. Oh, S. Qi, Y-Y. Kim & **M. B. Assouar**
« Elastic Metamaterial Insulator for Broadband Low-Frequency Flexural Vibration Shielding"
Phys. Rev. Applied, 8 (2017) 054034.

P86. S. Qi, Y. Li & **M. B. Assouar**
« *Acoustic focusing and energy confinement based on multilateral metasurfaces*"
Phys. Rev. Applied, 7 (2017) 054006. Highlighted by PhysicsBuzz and PhysicsCentral.

P85. S. Qi, **M. B. Assouar** & W. Chen
« Effects of bovine serum albumin on a single cavitation bubble"
Ultrasonics Sonochemistry, 38 (2017) 473.

P84. J. H. Oh & **M. B. Assouar**
« Quasi-static stop band with flexural metamaterial having zero rotational stiffness ».
Scientific Reports, 6 (2016) 33410.

P83. S. Qi, M. Oudich, Y. Li & **M. B. Assouar**
« Acoustic energy harvesting based on a planar acoustic metamaterial ».
Appl. Phys. Lett., 108 (2016) 263501.

P82. Y. Li, S. Qi & **M. B. Assouar**
« Theory of metascreen-based acoustic passive phased array"
New Journal of Physics, 18 (2016) 043024.

P81. Y. Li & **M. B. Assouar**
« Acoustic metasurface-based perfect absorber with deep subwavelength thickness ».
Appl. Phys. Lett., 108 (2016) 063502. Highlighted by AIP, Phys.org, ScienceDaily, ... Most cited paper in 2016 and among most read in 2016 and 2017 and a ESI highly cited paper.

P80. M. B. Assouar, M. Oudich & X. Zhou
« Acoustic metamaterials for sound mitigation ».
Comptes Rendus Physique, 17 (2016) 524, (invited paper).

P79. Y. Li & **M. B. Assouar**
« Three-dimensional collimated self-accelerating beam through acoustic metascreen ».
Scientific Reports, 5 (2015) 17612.

P78. Z. Hou & **M. B. Assouar**.
« *Tunable solid acoustic metamaterial with negative elastic modulus*".
Applied Physics Letters, 106 (2015) 251901.

P77. C. Bishop, J. P. Salvestrini, Y. Halfaya, S. Sundaram, Y. El Gmili, L. Pradere, J. Y. Marteau, **M. B. Assouar**, P. L. Voss, and A. Ougazzaden.
« *Highly sensitive detection of NO_2 gas using BGaN/GaN superlattice-based double Schottky junction sensors*".
Applied Physics Letters, 106 (2015) 243504.

P76. X. Zhou, **M. B. Assouar** & M. Oudich.
« *Acoustic superfocusing by solid phononic crystals*".

Applied Physics Letters, 105 (2014) 233506.

P75. X. Zhou, **M. B. Assouar** & M. Oudich.
« Subwavelength acoustic focusing by surface-wave-resonance enhanced transmission in doubly negative acoustic metamaterials".
Journal of Applied Physics, 116 (2014) 194501.

P74. M. Oudich, X. Zhou & **M. B. Assouar**.
« General analytical approach for sound transmission loss analysis through a thick metamaterial plate".
Journal of Applied Physics. 116 (2014) 193509.

P73. M. Oudich, B. Djafari-Rouhani, Y. Pennec, **M. B. Assouar** & B. Bonello
"*Negative effective mass density of acoustic metamaterial plate decorated with low frequency resonant pillars*"
Journal of Applied Physics, 116 (2014) 184504.

P72. M. B. Assouar, J-H Sun, F-S. Lin & J-C. Hsu
"*Hybrid Phononic Crystal Plates for Lowering and Widening Acoustic Band Gap*"
Ultrasonics, 54 (2014) 2159.

P71. J. Ma, Z. Hou & **M. B. Assouar**
"Opening a large full phononic band gap in thin elastic plate with resonant units"
Journal of Applied Physics, 115 (2014) 093508.

P70. E. Blampain, O, Elmazria, T. Aubert, **M. B. Assouar** & O. Legrani.
"*AlN/Sapphire: Promising Structure for High Temperature and High Frequency SAW Devices*"
IEEE Sensors Journal, 13 (2013) 4607.

P69. R. Salut, C. Gesset, G. Martin, **M. B. Assouar**, P. Bergonzo, R. Boudot, O. Elmazria, S. Ballandras.
"Fabrication of a 3 GHz oscillator based on Nano-Carbon-Diamond-film-based guided wave resonators"
Microelectronic Engineering, 112 (2013) 163.

P68. P.L. Bonanno, S. Gautier, Y.El Gmili, T. Moudakir, A.A. Sirenko, A. Kazimirov, Z.-H. Cai, J. Martin, W.H. Goh, A. Martinez, A. Ramdane, L. Le Gratiet, N. Maloufi, **M. B. Assouar** & A. Ougazzaden.
"Nondestructive mapping of chemical composition and structural qualities of group III-nitride nanowires using submicron beam synchrotron-based X-ray diffraction"
Thin Solid Films, 541 (2013) 46.

P67. T. Aubert, J. Bardong, O. Legrani, O. Elmazria, **M. B. Assouar**, G. Bruckner and A. Talbi
"In situ high-temperature characterization of AlN-based surface acoustic wave devices"
Journal of Applied Physics, 114 (2013) 014505.

P66. **M. B. Assouar**, M. Senesi, M. Oudich, M. Ruzzene & Z. Hou
"Broadband plate-type acoustic metamaterials for low-frequency sound attenuation"
Applied Physics Letters, 101 (2012) 173505.

P65. M. Oudich & **M. B. Assouar**
"Complex band structures and evanescent Bloch waves in two-dimensional finite phononic plate"
Journal of Applied Physics, 112 (2012) 104509.

P64. M. B. Assouar & M. Oudich
"Enlargement of a locally resonant sonic band gap by using double-sides stubbed phononic plates"
Applied Physics Letters, 100 (2012) 123506.

P63. Y. Li, Z. Hou, M. Oudich & **M. B. Assouar**
"*Analysis of surface acoustic wave propagation in a two-dimensional phononic crystal*"
Journal of Applied Physics, 112 (2012) 023524.

P62. M. Oudich & **M. B. Assouar**
"Surface acoustic wave band gaps in a diamond-based two-dimensional locally resonant phononic crystal for high frequency applications"
Journal of Applied Physics, 111 (2012) 014505.

P61. T. Aubert, O. Elmazria, **M. B. Assouar**, E. Blampain, A. Hamdan, D. Genève & S. Weber.
"*Investigations on AlN/Sapphire piezoelectric bilayer structure for high-temperature SAW applications*". IEEE Trans. Ultrason. Ferroelectr. Freq. Control, 59 (2012) 999.

P60. T. Aubert, J. Bardong, O. Elmazria, G. Bruckner, and **M. B. Assouar**
"Iridium Interdigital Transducers for High-Temperature Surface Acoustic Wave Applications
IEEE Trans. Ultrason. Ferroelectr. Freq. Control, 59 (2012) 194.

P59. H. Srour,J. P. Salvestrini, A. Ahaitouf, S. Gautier, T. Moudakir, **M. B. Assouar**, M. Abarkan, S. Hamady and A. Ougazzaden
"*Solar blind metal-semiconductor-metal ultraviolet photodetectors using quasi-alloy of BGaN/GaN superlattices*"
Applied Physics Letters, 99 (2011) 221101.

P58. M. Oudich, M. Senesi, **M. B. Assouar**, M. Ruzzene, J-H. Sun, B. Vincent, Z. Hou & T-T. Wu
"Experimental evidence of locally resonant sonic band gap in two-dimensional phononic stubbed plates"
Physical Review B, 84 (2011) 165136.

P57. **M. B. Assouar** & M. Oudich
"Dispersion curves of surface acoustic waves in a two-dimensional phononic crystal"
Applied Physics Letters, 99 (2011) 13505.

P56. D. Bria, **M. B. Assouar**, M. Oudich, Y. Pennec, J. Vasseur & B. Djafari-Rouhani
"Opening of simultaneous photonic and phononic band gap in two dimensional square lattice periodic structure"
Journal of Applied Physics, 109 (2011) 014507.

P55. T. Aubert, O. Elmazria, **M. B. Assouar**, L. Bouvot, M. Hehn, S. Weber, M. Oudich, D. Genève

"Bahavior of platinum/Tantalum as interdigital transducers for SAW devices in high temperature environements"
IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 58 (2011) 603.

P54. T. Aubert, **M. B. Assouar**, O. Legrani, O. Elmazria, C. Tiusan & S. Robert
"Highly textured growth of AlN films on sapphire by magnetron sputtering for high temperature SAW applications"
Journal of Vacuum and Science Technology A, 29/2 (2011) 021010

P53. M. Oudich, **M. B. Assouar** & Z. Hou
"Propagation of acoustic waves and waveguiding in a two-dimensional locally resonant phononic crystal plate"
Applied Physics Letters, 97 (2010) 193503

P52. M. Oudich, Y. Li, **M. B. Assouar** & Z. Hou
"Sonic band gap based on the locally resonant phononic plates with stubs"
New Journal of Physics,12 (2010) 083049

P51. T. Aubert, O. Elmazria, **M. B. Assouar**, L. Bouvot & M. Oudich
"Surface acoustic wave devices based on AlN/Sapphire structure for high temperature applications"
Applied Physics Letters, 96 (2010) 203503

P.50. Y. Li, Z. Hou, X-J Fu & **M. B. Assouar**
"Symmetric and anti-symmetric Lamb waves in two-dimensional phononic crystal plate"
Chinese Physics Letters, 27 (2010) 074303

P49. V. Laude, **M. B. Assouar** & Z. Hou
"Computation of plate wave dispersion diagrams and surface wave velocities without explicit boundary conditions"
IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 57 (2010) 1649

P48. **M. B. Assouar**, M. Dossot, S. Rizk, C. Tiusan & J. Bougdira
"The use of microwave plasma-assisted CVD on nanostructured iron catalyst to grow isolated bundles of carbon nanotubes"
Nanotechnology, 21 (2010) 065708

P47. Z. Hou, **M. B. Assouar**
"*Band gap in phononic crystal thin plate with/without mirror plane*"
Springer Science and Business Media, IUTAM Bookseries, 26/5 (2010) 325 (***Invited paper***)

P46. P.L. Bonanno, S. Gautier, A. A. Sirenko, Z.-H. Cai, W. H. Goh, J. Martin, A. Martinez, T. Moudakir, N. Maloufi, **M. B. Assouar**, A. Ramdane, L. Le Gratiet, A. Ougazzaden
"*Submicron beam x-ray diffraction of nanoheteroepitaxily grown GaN: experimental challenges and calibration procedures*"
Nucl. Instr. and Meth. in Phys. Res. B 268 (2010) 320

P45. H-L. Lee, I. A. Mohammed, M. Belmahi, **M. B. Assouar,** H. Rinnert & M. Alnot
"*Thermal and Optical Properties of CdS Nanoparticles in Thermotropic Liquid Crystal Monomers*"
Materials, 3 (2010) 2069.

P44. Hooi Ling Lee, A. M. Issam, M. Belmahi, **M. B. Assouar**, H. Rinnert, and M. Alnot
"*Synthesis and Characterizations of Bare CdS Nanocrystals Using Chemical Precipitation Method for Photoluminescence Application*"
Journals of Nanomaterials, Article ID 914501, (2009) doi:10.1155/2009/914501

P43. S. Rizk, **M. B. Assouar**, L. De Poucques, P. Alnot and J. Bougdira
« Controlled nanostructuration of catalyst particles for carbon nanotubes growth »
Journal of Physical Chemistry C. 113 (2009), 8718.

P42. Z. Hou, **M. B. Assouar**
« Numerical investigation of the propagation of elastic wave modes in one-dimensional phononic crystal plate coated on a uniform substrate »
Journal of Physics D: Applied Physics, 42 (2009), 085103.

P41. **M. B. Assouar**, P. Kirsch and P. Alnot
« New Love wave liquid sensor operating at 2GHz using an integrated micro-flow channel »
Measurement Science and Technology. 20 (2009), 095203.

P40. H. Lazhar, H. Labidi, **M. B. Assouar**, T. Easwarakhanthan, J. Bougdira, N. Attaf and M. S. Salah
« Transparent and conducting ZnO films grown by spray pyrolysis »
Semiconductor Science and Technology. 24 (2009), 035006.

P39. Z. Hou, **M. B. Assouar**
« Opening a band gap in the free phononic crystal thin plate with or without a mirror plane »
Journal of Physics D: Applied Physics, 41 (2008) 215102

P38. A. Fardeheb-Mammeri, **M. B. Assouar**, O. Elmazria, J-J. Fundenberger and B. Benyoucef
« *Growth and characterisation of c-axis inclined AlN film for shear wave devices* »
Semicondutor Science and Technology, 23 (2008), 095013
P37. Z. Hou, **M. B. Assouar**
« Transmission property of the one-dimensional phononic crystal thin plate »
Journal of Physics D: Applied Physics, 41 (2008) 095103

P36. A. Fardeheb-Mammeri, **M. B. Assouar**, O. Elmazria, C. Gatel, J-J. Fundenberger, B. Benyoucef,
« c-axis inclined AlN film growth in planar system for shear wave devices »
Diamond and Related Materials, 17 (2008), 1770-1774

P35. S. Rizk, **M. B. Assouar**, C. Gatel, M. Belmahi, J. Lambert, J. Bougdira
« Synthesis of carbon coated β-SiC nanofibers by microwave plasma assisted chemical vapour deposition in CH_4/H_2 gas mixture »
Diamond and Related Materials, 17 (2008), 1660-1665

P34. Z. Hou, **M. B. Assouar**
« Modeling of Lamb wave propagation in plate with two-dimensional phononic crystal layer coated on uniform substrate using Plane-wave-expansion method »
Physics Letters A, 372 (2008), 2091-2097

P33. F. Bénédic, **M. B. Assouar**, P. Kirsch, D. Monéger, O. Brinza, O. Elmazria, P. Alnot, and A. Gicquel

« Very high frequency SAW devices based on nanocrystalline diamond and aluminum nitride layered structure achieved using e-beam lithography »
Diamond and Related Materials, 17 (2008), 804-808

P32. **M. B. Assouar**, B. Vincent, H. Moubchir
« Phononic crystals based on $LiNbO_3$ realized using domains inversion by e-beam irradiation »
IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 55/2 (2008) 273-278

P31. S. Rizk, **M. B. Assouar**, M. Belmahi, L. Le Brizoual, and J. Bougdira
« Synthesis of SiC nanofibers by microwave plasma assisted chemical vapour deposition in CH_4/H_2 gas mixture »
Physica Status Solidi (a), 204/9, (2007), 3085-3090

P30. **M. B. Assouar**, O. Elmazria, P. Kirsch, V. Mortet, C. Tiusan, P. Alnot
« High frequency SAW devices based on AlN/Diamond layered structure realized using e-beam lithography »
Journal of Applied Physics, 101/11, (2007), 114507-1-114507-5

P29. P. Kirsch, **M. B. Assouar**, O. Elmazria, M. Elhakiki, V. Mortet, P. Alnot
« Combination of e-beam lithography and of high velocity AlN/diamond layered structure for SAW filters in X band »
IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control, 54/7, (2007), 1486 – 1491

P28. **M. B. Assouar**, R. J. Jiménez Riobóo, O. Elmazria, M. Vila
« Study of effect of deposition temperature of AlN films on SAW velocity using brillouin spectroscopy »
Diamond and Related Materials, 16, (2007), 1417-1420

P27. L. Le Brizoual, H. Chatei, M. Belmahi, **M. B. Assouar**, J. Bougdira
« Transmission Electron Microscopy study of carbon nanostructures grown by MPACVD »
Diamond and Related Materials, 16, (2007), 1244-1249

P26. **M. B. Assouar**, O. Elmazria, C. Tiusan and P. Alnot
« Low temperature growth of sputtered AlN films for layered structure SAW devices »
Integrated Ferroelectrics, 91, (2007), 119-128

P25. P. Kouakou, V. Brien, **M. B. Assouar**, V. Hody, M. Belmahi, H. N. Migeon, J. Bougdira
« Preliminary synthesis of carbon nitride thin films by N2/CH4 microwave plasma assisted by chemical vapor deposition: characterisation of discharge and the obtained films »
Plasma Processes & Polymers, 4 (2007) 210

P24. E. Aubert, E. Wenger, M. Link, **M. B. Assouar**, C. Didiejean, C. Lecomte
« Thin film disorientation measurement using the single crystal Nonius Kappa CCD diffractometer »
Journal of Applied Crystallography, 39, (2006), 919-921

P23. **M. B. Assouar**, O. Elmazria, M. El Hakiki, P. Alnot
« Study of acoustical and optical properties of AlN films for SAW and BAW devices: correlation between these properties »
Integrated Ferrolectrics, 82, (2006) pp: 45-54

P22. P. Kirsch, **M. B. Assouar**, O. Elmazria, V. Mortet, P. Alnot
« 5GHz surface acoustic wave devices based on aluminum nitride/diamond layered structure realized using electron beam lithography »
Appl. Phys. Lett. 88, (2006) pp: 223504-1 223504-3.

P21. M. Link, M. Schreiter, J. Weber, R. Gabl, D. Pitzer, R. Primig, W. Wersing, **M. B. Assouar**, O. Elmazria
« C-axis inclined ZnO films for shear-wave transducers deposited by reactive sputtering using an additional blind »
Journal of Vacuum Science and Technology A., 24 (2006) pp: 218-222.

P20. H. Chatei, M. Belmahi, **M. B. Assouar**, L. Le Brizoual, P. Bourson, J. Bougdira
« *Growth and characterisation of carbon nanotips obtained by MPACVD system using CH_4/CO_2 gas mixture* »
Diamond and Related Materials, 15 (2006) pp : 1041 – 1046

P19. O. Elmazria, F. Bénédic, M. El Hakiki, H. Moubchir, **M.B. Assouar**, F. Silva
« *Nanocrystalline diamond films for surface acoustic wave devices* »
Diamond and Related Materials, 15 (2006), pp : 193-198.
P18. M. B. Assouar, R. J. Jiménez Riobóo, M. Vila, P. Alnot
« *Effect of Deposition Temperature on Surface Acoustic Wave Velocity of Aluminium Nitride Films Determined by Brillouin Spectroscopy* »
Journal of Applied Physics, 98, (2005) pp: 096102-1, 096102-3

P17. T. Easwarakhanthan, **M. B. Assouar**, P. Pigeat, P. Alnot
« Optical models for rf-magnetron reactively sputtered AlN films »
Journal of Applied Physics, 98 (2005) pp: 073531-1, 073531-7

P16. M. Belmahi, L. Le Brizoual, **M. B. Assouar**, T. Tousch, M. Vergnat, J. Bougdira, P. Alnot
« Experimental study of a pulsed microwave plasma assisted chemical vapour deposition of carbon nanotubes »
Physica status solidi (a), 202/11 (2005) pp : 2079-2084.

P15. M. El Hakiki, O. Elmazria, **M. B. Assouar**, V. Mortet, L. Le Brizoual, M. Vanecek and P. Alnot
« ZnO/AlN/diamond layered structure for SAW devices combining high velocity and high electromechanical coupling coefficient »
Diamond and Related Materials. 14 (2005) pp: 1175-1178

P14. O. Elmazria, M. El Hakiki, V. Mortet, **M. B. Assouar**, L. Bouvot, M. Nesladek, M. Vanecek, P. Bergonzo, M. D'Olieslaeger, and P. Alnot
« Effect of the nucleation process on freestanding AlN/diamond SAW filter characteristics »
IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control, 51, (2004) pp: 1704-1709

P13. **M. B. Assouar**, O. Elmazria, M. El Hakiki, P. Alnot
« Study of structural and microstructural properties of AlN films deposited on silicon and quartz for SAW devices »
Journal of Vacuum Science and Technology B. 22/4, (2004) pp: 1717-1722.

P12. **M. B. Assouar**, M. El Hakiki, O. Elmazria, P. Alnot, C. Tiusan

« Synthesis and microstructural characterisation of reactive RF magnetron sputtering AlN films for surface acoustic wave filters »
Diamond and Related Materials, 13/4-8, (2004) pp: 1111-1115.

P11. F. Bénédic, **M. B. Assouar**, F. Mohasseb, O. Elmazria, P. Alnot, A. Gicquel
« Surface acoustic wave devices based on nanocrystalline diamond and aluminium nitride»
Diamond and Related Materials, 13 (2004), pp : 347-353.

P10. F. Bénédic, M. Belmahi, O. Elmazria, **M. B. Assouar**, J-. J. Fundenberger et P. Alnot.
« Investigations on nitrogen addition in CH_4-H_2 gas mixture used for diamond deposition for a better understanding and the optimisation of the synthesis process »
Surface and Coating Technology 176/1 (2003) pp : 37-49.

P9. O. Elmazria, **M. B. Assouar**, P. Renard et P. Alnot.
« Electrical properties of Piezoelectric Aluminium Nitrides Films Deposited by Reactive DC Magnetron Sputtering »
Physica Status Solidi (a), 196/2 (2003) pp : 416-421.

P8. M. B. Assouar, O. Elmazria, L. Le Brizoual, P. Alnot.
« *Reactive DC magnetron sputtring of aluminium nitride films for SAW devices* »
Diamond and Related Materials, 11 (2002) pp: 413-417.

P7. M. B. Assouar, O. Elmazria, V. Mortet, P-. Y. Jouan, M. a. Djouadi, P. Alnot.
« *Piezoelectric aluminium nitride deposited by triode sputtering for acoustic wave devices* »
Ferroelectrics, 273 (2002) pp: 249-254.

P6. A. Talbi, O. Elmazria, F. Sarry, **M. B. Assouar**, L. Bouvot, P. Alnot.
« *Surface acoustic wave pressure sensor* »
Ferroelectrics, 273 (2002) pp: 53-58.

P5. R. J. Jiménez Riobóo, E. Rodríguez-Cañas, M. Vila, C. Prieto, F. Calle, T. Palacios, M. A. Sánchez, F. Omnès, O.Ambacher, **M. B. Assouar** et O. Elmazria
« Hypersonic characterization of sound propagation velocity in $Al_xGa_{1-x}N$ thin films »
J. Appl. Phys., 92/11, (2002), pp : 6868-6874.

P4. V. Mortet, M. Nesladek, J. D'Haen, G. Vanhoyland, O. Elmazria, **M.B. Assouar**, P. Alnot, et M. D'Olieslaeger
« Deposition of aluminium nitride film by magnetron sputtering for diamond-based surface acoustic wave applications »
Phys. Stat. Sol. (a), 193/3 (2002) pp : 482-488.

P3. V. Mortet, O. Elmazria, M. Nesladek, **M.B. Assouar**, G. Vanhoyland, J. D'Haen, M. D'Olieslaeger, P. Alnot
« Aluminium Nitride - Unpolished Freestanding CVD Diamond Surface Acoustic Wave Filters »
Appl. Phys. Lett. 81/9 (2002) pp : 1720-1722.

P2. M. B. Assouar, F. Bénedic, O. Elmazria, M. Belmahi, R. Jiménez Rioboo et P. Alnot.
« *MPACVD diamond films for Surface Acoustic Waves Filters* »
Diamond and Related Materials, 10 (2001) pp : 681-685.

P1. M. B. Assouar, O. Elmazria, R. Jiménez Rioboo, F. Sarry et P. Alnot.

« *Modelling of SAW Filter Based on ZnO/DIAMOND/Si Layered Structure Including Velocity Dispersion* »
Applied Surface Science, 164 (2000) pp : 200-204.

Proceedings in International Conferences

Pg37. **M. B. Assouar**, L. Cao, S. Wan, Y. Zeng & Y. Zhu
« Phononic Skyrmions: a new horizon to structure acoustic and elastic waves ?"
Proceeding of PHONONICS 2023, 120 (2023).

Pg36. **M. B. Assouar**, Y. Zhu, L. Cao, K. Donda, S. Fan, Y. Li
« Acoustic and Elastic Metasurfaces for Controllable Wave Manipulation"
Proceeding of PHONONICS 2019, 154 (2019).

Pg35. S. Qi, Y. Li & **M. B. Assouar**. *«Acoustic Energy Harvesting with Acoustic Metamaterials and Metasurfaces»*.
Proceeding of PHONONICS 2017, 130 (2017).

Pg34. J. H. Oh, S. Qi, Y-Y. Kim & **M. B. Assouar**. *«Achieving Quasi-Static Stop Band by Zero Rotational Stiffness Elastic Metamaterial"*.
Proceeding of PHONONICS 2017, 208 (2017).

Pg33. Y. Li **& M. B. Assouar**
« Ultrathin Perfect Absorber Based on Acoustic Metasurface".
INTER-NOISE and NOISE-CON Congress and Conference Proceedings, InterNoise17, 3336.

Pg32. M. B. Assouar, S. Qi & Y. Li.
« Acoustic metamaterials and metasurfaces: a transformative approach for phononic insulators and energy harvesting"
Proc. of SPIE, 1011, 101112B (2017).

Pg31. **M. B. Assouar**, M. Oudich & X. Zhou.
« Sound insulation and energy harvesting based on acoustic metamaterial plate"
Proceeding of SPIE Vol. 9438, 94380U (2015).

Pg30. M. Oudich, Y. Pennec, B. Djafari-Rouhani, **M. B. Assouar** & B. Bonello.
"*Acoustic metamaterial plate with negative effective mass density*"
Proceeding of PHONONICS 2013, 142 (2013).

Pg29. T. Aubert, F. Sarry, O. Elmazria, **M. B. Assouar** L. Bouvot & P. Nicolay.
"*High temperature Pt/LGS SAW sensor: from theory to experiment"*
Proc. IEEE Sensors, (2011) 1632.

Pg28. J-P. Salvestrini, A. Ahaitouf, H. Srour; S. Gautier, T. Moudakir, **M. B. Assouar** & A. Ougazzaden
"Tuning of internal gain, dark current and cutoff wavelength of UV photodetectors using quasi-alloy of BGaN-GaN and BGaN-AlN superlattices"
Proc. of SPIE, 8268 (2012) 82682S (*invited paper*)

Pg27. T. Aubert, J. Bardong, **M. B. Assouar**, G. Bruckner, **O. Elmazria**
"*Is AlN/Sapphire bilayer structure an alternative to langasite for ultra-high-temperature SAW applications*?"
Proc. IEEE International Ultrasonics Symposium, pp: 2082-2085 (2011)

Pg26. M. Oudich, **M. B. Assouar** & Z. Hou
"*Elastic Waves Propagation in a Locally Resonant Phononic Stubbed Plates*"

Proceeding of First International Conference on Phononic Crystals, Metamaterials and Optomechanics, (2011) 114.

Pg25. E. Blampain, O. Elmazria, T. Aubert, **M. B. Assouar**, O. Legrani
"Surface Acoustic Wave sensor based on AlN/Sapphire structure for high temperature and high frequency applications"
2011 IEEE Sensors Proceedings, 610 (2011)

Pg24. T. Aubert, O. Elmazria, **M. B. Assouar**, A. Hamdan, D. Geneve
« Reliability of AlN/Sapphire bilayer strcuture for high-temperature SAW applications »
Proc. IEEE International Ultrasonics Symposium, (2010), pp: 1490-1493

Pg23. V. Laude, **M. B. Assouar**, Z. Hou
« Computation of plate wave dispersion diagrams and surface wave velocities without explicit boundary conditions »
Proc. IEEE International Ultrasonics Symposium, (2009), pp: 1664-1667

Pg22. T. Aubert, O. Elmazria, **M. B. Assouar**, L. Bouvot, Z. Bournebe, M. Hehn, S. Weber, M. Oudich, P. Alnot
"*Study of tantalum and iridium as adhesion layers for Pt/LGS high temperature SAW devices*"
Proc. IEEE International Ultrasonics Symposium, (2009), pp: 1672-1675

Pg21. R. Salut, C. Gesset, S. Saada, V. Yantchev, **M. B. Assouar**, F. Bénédic, P. Bergonzo, F. Omnes, V. Edon, D. Rémiens, O. ElMazria, I. Kartadjiev, S. Ballandras
"*Fabrication Of GHz Range Oscillators Stabilized by Nano-Carbon-Diamond-based Surface Acoustic Wave Resonators*"
Proc. IEEE International Ultrasonics Symposium, (2009), pp: 927-930

Pg20. T. Aubert, O. Elmazria, **M. B. Assouar**
« Wireless and Batteryless Surface Acoustic Wave Sensors For High Temperature Environments »
Proc. International Conference on Electronic Measurement and Instruments, (2009), pp: 890-898 (Invited paper)

Pg19. P. Kirsh, **M. B. Assouar**, P. Alnot
« Development of a new Love wave liquid sensor operating at 2GHz achieved by electron beam lithography using an integrated micro-flow channel: the liquichip System »
Proc. IEEE International Ultrasonics Symposium, (2008), pp: 1846-1849.

Pg18. T. Aubert, F. Sarry, O. Elmazria, L. Bouvot, **M. B. Assouar**, P. Nicolay
« Extraction of COM parameters on Pt/LGS for high temperature SAW sensor »
Proc. IEEE International Ultrasonics Symposium, (2008), pp: 820-823

Pg17. Z. Hou, **M. B. Assouar**
« Modelling Of Lamb Wave Propagation In Plate With Two-dimensional Phononic Crystal Layer Coated On Uniform Substrate Using Plane-wave-expansion Method »
Proc. IEEE International Ultrasonics Symposium, (2007), pp : 179-182.

Pg16. M. B. Assouar, O. Elmazria, P. Kirsch, V. Mortet, P. Alnot
« Temperature coefficient of frequency and electromechanical coupling coefficient study of SAW devices operating In X band and based On AlN/diamond layered structure »
Proc. IEEE International Ultrasonics Symposium, (2007), pp : 284-287

Pg15. P. Nicolay, O. Elmazria, **M. B. Assouar**, F. Sarry, and L. Lebrizoual
« Theoretical and experimental study of the differential thermal expansion effect on the TCD of layered SAW temperature sensors »
Proc. IEEE International Ultrasonics Symposium, (2007), pp : 272-275

Pg14. O. Elmazria, F. Bénédic, **M. B. Assouar**, D. Monéger, A. Gicquel, P. Alnot
« Very high surface acoustic wave velocity on the layered structure formed of aluminium nitride on nanocrystalline diamond on silicon »
Proc. IEEE International Ultrasonics Symposium, (2007), pp : 276-279

Pg13. M. B. Assouar, B. Vincent, O. Elmazria, P. Alnot
« Microstructuration of $LiNbO_3$ by Domains Inversion Using Electron Beam Irradiation for Phononic Applications »
Proc. IEEE International Ultrasonics Symposium, (2006), pp: 505-508
Pg12. P. Kirsch, **M. B. Assouar**, O. Elmazria and P. Alnot
« 5 GHz SAW devices based on AlN/diamond layered structures »
Proc. IEEE International Ultrasonics Symposium, (2006), pp: 2293-2296

Pg11. M. B. Assouar, B. Vincent, H. Moubchir, O. Elmazria, A. Khelif, V. Laude
« Domains Inversion in $LiNbO_3$ Using Electron Beam irradiation for Phononic Crystals »
Proc. IEEE International Symposium on the Application of Ferroelectrics, (2006), pp: 111-114

Pg10. P. Kirsch, **M. B. Assouar**, O. Elmazria, C. Tiusan and P. Alnot
« Achievement of SAW Devices Based on 36° YX $LiTaO_3$ Substrates Using Electron Beam Lithography »
Proc. IEEE International Symposium on the Application of Ferroelectrics, (2006), pp: 269-272

Pg9. M. Link, M. Schreiter, J. Weber, D. Pitzer, R. Primig, **M. B. Assouar**, O. Elmazria
« C-axis inclined ZnO films deposited by reactive sputtering using an additional blind for shear BAW devices »
Proc. IEEE International Ultrasonics Symposium, (2005) pp: 202-205

Pg8. S. Benchabane, A. Khelif, W. Daniau, L. Robert, V. Pétrini, **M. B. Assouar**, B. Vincent, O. Elmazria, J. Krüger, and V. Laude
« Silicon phononic crystal for surface acoustic waves »
Proc. IEEE International Ultrasonics Symposium, (2005) pp: 922-925

Pg7. **M. B. Assouar**, O. Elmazria, M. El Hakiki, P. Alnot et C. Tiusan
« Low temperature AlN thin films growth for layered structure SAW and BAW devices »
Proc. IEEE International Symposium on Applications of Ferrolectrics – ISAF-04, (2004), pp: 43-46.

Pg6. M. El Hakiki, O. Elmazria, **M. B. Assouar**, V. Mortet, A. Talbi et F. Sarry
« High Coupling and High Velocity Surface Acoustic Waves Using a Three-layer structure ZnO/AlN/diamond *»*
Proc. IEEE Ultrasonics Symp., (2004), pp : 195-198

Pg5. M.El Hakiki, O. Elmazria, V. Mortet, **M. B. Assouar**, M. Nesladek, and P. Alnot
« Low TCF and High Velocity SAW Devices Based on AlN/diamond structure »
Proceeding of the World Congress on Ultrasonic WCU 2003, pp : 1451-1454.

Pg4. O. Elmazria, M. El Hakiki, V. Mortet, **M. B. Assouar**, L. Bouvot, M. Nesladek, M. Vanecek, P. Bergonzo, M. D'Olieslaeger, and P. Alnot
« Effect of the nucleation process of freestanding CVD diamond on AlN/diamond SAW filter characteristics »
Proc. 2003 IEEE Ultrasonics Symp. pp 1746-1749.

Pg3. **M. B. Assouar**, O. Elmazria, L. Le Brizoual, M. Belmahi et P. Alnot
« Growth of piezoelectric aluminium nitride for layered SAW devices »
Proc. of the 2002 IEEE International Frequency Control Symposium, pp 333-336.

Pg2. O. Elmazria, V. Mortet, M. El Hakiki, **M.B. Assouar**, M. Nesladek, et P. Alnot.
«High Velocity SAW Using Aluminum Nitride Film on Unpolished Nucleation Side of Freestanding CVD diamond »
Proc. 2002 IEEE Ultrasonics Symp. pp 136-139.

Pg1. M. B. Assouar, O. Elmazria, F. Sarry et P. Alnot.
« *Simulation of SAW Filter of ZnO/Diamond/Si Layered Structure by Simulator Based on Coupling of Mode Theory Including Frequency Dispersion* »
Proceedings of 14th EFTF European Frequency and Time Forum (2000) pp : 296-299.