

Dr BRACCINI MURIEL List of publications

[Refereed journal articles](#): 42

[Invited talks](#): 13 (6 international)

[Peer review conference papers](#): 24 (22 international)

[Others conferences/workshops](#): 52 (25 international)

[Seminars](#): 9

[Books/book chapters](#): 2 / 2

Refereed journal articles

- R1.** *Hot tearing phenomena in Al-Cu alloys: grain refinement effect*, M. Braccini, C.L. Martin, M. Suéry and Y. Bréchet, **Matériaux et Techniques**, octobre 2000, n°5-6, pp.19-24
- R2.** *Determination of the rheological behaviour of partially solidified alloys for the prediction of casting defects*, M. Suéry, C. L. Martin, M. Braccini and Y. Bréchet, **Advanced Engineering Materials** 3, n°8 (2001), pp.589-593
- R3.** *Rheological behaviour of the mushy zone at small strains*, C.L. Martin, M. Braccini and M. Suéry, **Mat. Sci. Eng. A325** (2002), pp. 292-301
- R4.** *Low shear rate behavior at high solid fractions of partially solidified Al-8 wt.%Cu alloys*, M. Braccini, C.L. Martin, A. Tourabi, Y. Bréchet and M. Suéry, **Mat. Sci. Eng. A337** (2002), pp.1-11
- R5.** *Influence of grain refinement on hot tearing in aluminium-copper alloys used in foundry industries*, M. Braccini, M. Suéry, C. Laguerre and M. Stucky, **Rev. Met.**, N°2 (February 2003), pp. 157-164
- R6.** *Experimental study of the fracture behavior of solidifying Al-Cu alloys*, Braccini-M; Martin-CL; Suery-M; Stucky-M, **Journal-of-Materials-Science-and-Technology**. (2004) 12(3): 307-19
- R7.** *A self-consistent approach to modeling strain gradient plasticity*, M. Braccini and D. S. Wilkinson, **Scripta Materialia** 49/1 (2003) pp 53-57
- R8.** *Wetting, interfacial interactions and sticking in glass/steel systems*, J. Pech, M. Braccini, A. Mortensen, N. Eustathopoulos, **Mat. Sci. and Eng. A384** (2004), pp.117-128
- R9.** *A comparative study of three adhesion tests (EN 582, similar to ASTM C633, LASAT (LAsER Adhesion Test), and bulge and blister test) performed on plasma sprayed copper deposited on aluminium 2017 substrates*, M. Arrigoni, S. Barradas, M. Braccini, M. Dupeux, M. Jeandin, M. Boustie, C. Bolis, L. Berthe, **J. Adhesion Sci. Technol.**, Vol. 20 (2006), n°5, pp. 471-487
- R10.** *Crack initiation in Cu-interconnect structures*, Brillet-Rouxel-H; Arfan-E; Leguillon-D; Dupeux-M; Braccini-M; Orain-S, **Microelectronic-Engineering**. (Nov.-Dec. 2006) 83(11-12): 2297-302
- R11.** *Adhesion Energy of a YPSZ EBPVD Layer in Two Thermal Barrier Coating Systems*, They P.-Y., Poulain M., Dupeux M., Braccini M., **Surface Coatings Technology** 202 (2007), 648-652

R12. *Microstructural characterization and determination adhesion of 100Cr6 steel coatings thermally sprayed on a 35CrMo4 substrate*, M. A. Bradai, M. Braccini, A. Ati, N. Bounar and A. Benabbas, **Surface Coatings Technology** 202 (2008) 4538-43

R13. *Shaft loaded blister test for metal/ceramic brazing fracture*, Kozlova O., Braccini M., Eustathopoulos N., Devismes M.-F., Dupeux M., **Materials Letters** 62/21-22 (2008) 3626-28

R14. *Spallation of Two Thermal Barrier Coating Systems: experimental study of adhesion and energetic approach to lifetime during cyclic oxidation*, P.-Y. Théry, M. Poulain, M. Dupeux, M. Braccini, **Journal of Materials Science** 44(7) (2009) 1726-1733 <https://doi.org/10.1007/s10853-008-3108-x>

R15. *Damage prediction of carbon fiber composite armoured actively cooled plasma-facing components under cycling heat loads*, Chevet G., Herb V., Schlosser J., Martin E., Camus G., Braccini M., Courtois X., Escourbiac F., Missirlian M., **Physica Scripta** T138 (2009) Article Number: 014057

R16. *Brazing copper to alumina by reactive CuAgTi alloys*, Kozlova O., Braccini M., Voytovych R., Eustathopoulos N., Martinetti P., Devismes M.-F., **Acta Materialia** 58 (4) (2010) 1252-1260

R17. *Clinical impact of surgical glues: interdisciplinary indications for its use Reply*, Perrin B.R.M., Braccini M., Dupeux M., et al., **European Journal of Cardio-Thoracic Surgery** 37(4) (2010) 985-986

R18. *Cu-based metallic glass particle additions to significantly improve overall compressive properties of an Al alloy*, Dudina D.V., Georgarakis K., Aljerf M., Li Y, Braccini M., Yavari A.R., Inoue A., **Composites A-Applied Science and Manufacturing** 41(10) (2010) 1551-1557

R19. *Study of stress in tensile nitrogen-plasma-treated multilayer silicon nitride films*, P. Morin, G. Raymond, D. Benoit, D. Guiheux, R. Pantel, F. Volpi, M. Braccini, **J. Vac. Sci. Technol. A** 29 (2011) 041513 <https://doi.org/10.1116/1.3602082>

R20. *Chemical changes at the interface between low carbon steel and an Al-Si alloy during solution heat treatment*, M. Zhe, O. Dezellus, B. Gardiola, M. Braccini, J.C. Viala, **Journal of Phase Equilibria and Diffusion** 32(6) (2011), 486-497

R21. *Modified 4-Point Bending Test for Adhesion Measurement at the Interface of Iron Coated with Aluminum Casting Alloy*, M. Zhe, O. Dezellus, G. Parry, M. Braccini, J. C. Viala, **Journal of Adhesion Science and Technology** 26 (2012) 1-17 <https://doi.org/10.1163/016942411X559049>

R22. *Mechanical resistance of patterned BCB bonded joints for MEMS packaging*, C. Cuminatto, M. Braccini, G. Schelcher, G. Parry, F. Parrain, **Microelectronic Engineering** 111 (2013) 39-44 <https://doi.org/10.1016/j.mee.2013.05.012>

R23. *Elastic properties of tensile nitrogen-plasma-treated multilayer silicon nitride films*, M. Braccini, F. Volpi, A. Devos, G. Raymond, D. Benoit, P. Morin, **Thin Solid Films** 551(2014) 120-126 <https://doi.org/10.1016/j.tsf.2013.11.012>

R24. *Dual mechanical behaviour of hydrogen in stressed silicon nitride thin films*, F. Volpi, M. Braccini, A. Devos, G. Raymond, A. Pasturel, P. Morin, **Journal of Applied Physics** 116 (2014) 043506

- R25.** *Hypereutectoid steel coatings obtained by thermal flame spraying – Effect of annealing on microstructure, tribological properties and adhesion energy*, A. Belamri, A. Ati, M. Braccini, S. Azem, **Surface and Coatings Technology** 263 (2015) 86-89
- R26.** *Breakaway oxidation of austenitic stainless steels induced by alloyed sulphur*, C. Pascal, V. Parry, E. Fedorova, M. Braccini, P. Chemelle, N. Meyer, D. Oquab, D. Monceau, Y. Wouters, M. Mantel, **Corrosion Science** 93 (2015) 100-108 <https://doi.org/10.1016/j.corsci.2015.01.007>
- R27.** *A model for patterned interfaces debonding – Application to adhesion tests*, C. Cuminatto, G. Parry, M. Braccini, **International Journal of Solids and Structures** 75-76 (2015) 122-133 <https://doi.org/10.1016/j.ijsolstr.2015.08.006>
- R28.** *Comparison of damaging behavior of oxide scales grown on austenitic stainless steels using tensile test and cyclic thermogravimetry*, E. Fedorova, M. Braccini, V. Parry, C. Pascal, M. Mantel, F. Roussel-Dherbey, D. Oquab, Y. Wouters, D. Monceau, **Corrosion Science** 103 (2016), 145-156 <https://doi.org/10.1016/j.corsci.2015.11.012>
- R29.** *Adhesion of surgical sealants used in cardiothoracic and vascular surgery*, B.M. Perrin, M. Braccini, C.M. Bidan, C. Derail, E. Papon, Y. Barrandon, **International Journal of Adhesion and Adhesives** 70 (2016) 81-89
- R30.** *Interplay between bond breaking and plasticity during fracture at a nanomolecularly-modified metal-ceramic interface*, M. Kwan, M. Braccini, A. Jain, M. W. Lane, G. Ramanath, **Scripta Materialia** 121 (2016) 42-44 (<https://doi.org/10.1016/j.scriptamat.2016.04.034>)
- R31.** *Relations between oxidation induced microstructure and mechanical durability of oxide scales*, V. Parry, C. Pascal, M. Braccini, E. Fedorova, M. Mantel, Y. Wouters, D. Oquab, D. Monceau, R. Estevez, G. Parry, **Oxidation of Metals** 88 (2017) 29-40 (<https://doi.org/10.1007/s11085-016-9673-5>).
- R32.** *A capacitance-based solution to monitor absolute crack length in four-point bending test: modelling and experiments*, F. Volpi, H. Lu, Y. Li, A.A. Nawaz, S. Fournier, M. Braccini, **Sensors and Actuators A254** (2017) 145-151 (<https://doi.org/10.1016/j.sna.2016.12.017>)
- R33.** *Relation between microstructure induced by oxidation and room-temperature mechanical properties of the thermally grown oxide scales on austenitic stainless steels*, C. Pascal, M. Braccini, V. Parry, E. Fedorova, M. Mantel, D. Oquab, D. Monceau, **Materials Characterization** 127 (2017) 161-170 <https://doi.org/10.1016/j.matchar.2017.03.003>
- R34.** *Frequency-tunable toughening in a polymer-metal-ceramic stack using an interfacial molecular nanolayer*, M. Kwan, M. Braccini, M. W. Lane, G. Ramanath, **Nature Communications**, 9(1) (2018) 5249. <https://doi.org/10.1038/s41467-018-07614-y>
- R35.** *Nanostructured TiO₂ anatase-rutile-carbon solid coating with visible light antimicrobial activity*, S. Krumdieck, R. Boicho, R. Gorthy, J. Land, Sa. Lay, A. Gardecka, M. I. J. Polson, A.e Wasa, J. E. Aitken, J. Heinemann, G.s Renou, G. Berthome, F. Charlot, T. Encinas, M. Braccini, C. Bishop, **Scientific Reports** (2019) 9:1883 <https://doi.org/10.1038/s41598-018-38291-y>
- R36.** *Resistive-nanoindentation on gold: experiments and modeling of the electrical contact resistance*, F. Volpi, M. Rusinowicz, S. Comby-Dassonneville, G. Parry, C. Boujrouf, M. Braccini, D.

Pellerin, M. Verdier, **Review of Scientific Instruments** 92(3) (2021) 035102
<https://doi.org/10.1063/5.0032682>

R37. *Development of a multifunctional nanoindenter integrated in-situ Scanning Electron Microscope - application to the monitoring of piezoresponse and electro-mechanical failures*, F. Volpi, C. Boujrouf, M. Rusinowicz, S. Comby-Dassonneville, F. Mercier, R. Boichot, M. Chubarov, R. Coq Germanicus, F. Charlot, M. Braccini, G. Parry, D. Pellerin, M. Verdier, **Thin Solid Films** 735 (2021) 138891
<https://doi.org/10.1016/j.tsf.2021.138891>

R38. *Microstructure and correlated mechanical properties study of Ni-(Fe, Co)-Mn-(Al, In) as-spun ribbons*, C. Zhang, L. Porcar, S. Miraglia, P. Donnadiou, M. Braccini, R. Haettel, M. Verdier, **Journal of Alloys and Compounds** 905 164139 (2022) <https://doi.org/10.1016/j.jallcom.2022.164139>

R39. *Failure of a brittle layer on a ductile substrate: Nanoindentation experiments and FEM simulations*, M. Rusinowicz, G. Parry, F. Volpi, D. Mercier, S. Eve, U. Lüders, F. Lallemand, M. Choquet, M. Braccini, C. Boujrouf, E. Hug, R. Coq Germanicus, M. Verdier, **Journal of Mechanics and Physics of Solids** 104859 (2022) <https://doi.org/10.1016/j.jmps.2022.104859>

R40. *Evidence of Plasticity-Driven Conductivity Drop in an Ultra-Low-k Dielectric Organosilicate Glass*, M. Rusinowicz, F. Volpi, G. Parry, M. Braccini, C. Boujrouf, M. Verdier, **Journal Advanced Functional Materials** 2207354 (2022) <https://doi.org/10.1002/adfm.2022073>

R41. *Study of cleavage fracture in ferritic stainless steels - Part I: Development and characterization of model microstructures*, L. Jacquet, N. Meyer, M. Libert, F. De Geuser, M. Braccini, R. Estevez, M. Mantel, **Materials Science and Engineering A**864 (2023) 144534
<https://doi.org/10.1016/j.msea.2022.144534>

R42. *Study of cleavage fracture in ferritic stainless steels - Part II: Cleavage micromechanisms and critical stresses*, L. Jacquet, R. Estevez, M. Braccini, M. Libert, N. Meyer, M. Mantel, **Materials Science and Engineering A**866 (2023) 144660 <https://doi.org/10.1016/j.msea.2023.144660>

Invited talks

- I1.** *Rheological behavior of Al-Cu alloys in the semi-solid state and its effects on hot tearing*, **Rencontre franco-norvégienne**, Trondheim (Norvège), octobre 1999
- I2.** *Effet des caractéristiques physico-chimiques et du mode de sollicitation sur la tenue mécanique d'interfaces résine époxyde / acier inoxydable*, M. Braccini, M. Dupeux, J. Laurencin, A. Benkassa, N. Pot, F. Dorval, J.-C. Joud, D. Leguillon, A. Gandini, M.-G. Barthes Labrousse, M. Aufray, A.A. Roche, réunion **GDR RISM**, Lyon, novembre 2003
- I3.** *Prédiction d'endommagements et de ruptures dans les assemblages de composants face au plasma*, M. Braccini, M. Dupeux, D. Leguillon, O. Gillia, **Atelier CEA/CNRS** sur les matériaux et assemblages pour les réacteurs Tokamak, Cadarache, 22-23 avril 2004
- I4.** *Amorçage et propagation de fissures à une interface résine époxyde / acier inoxydable*, Groupe de travail **MECAMAT 'Mécanique des Polymères'**, ENSAM Paris, 7 mai 2004
- I5.** *Study of interface adhesion properties by in situ tensile test in a SEM chamber*, **Journées Annuelles du LCTS**, Carcans, 16 juin 2010
- I6.** *Adhérence aux interfaces*, réunion du **GDR MECANO**, Lyon, octobre 2011
- I7.** *Oxide scale adhesion measurement using mechanical tests: in situ tensile test and 4-point bending*, **Journée de séminaires Franco-Russe "Adhérence de couches d'oxydes thermiques"**, Grenoble, 8 juillet 2014
- I8.** *Solid-solid interface adherence: mechanics, chemistry and geometry*, Department of Mechanical Engineering and Mechanics Seminar, **Lehigh University**, Bethlehem, PA, USA, April 24, 2015
- I9.** *Fracture mechanics applied to interface*, **Ecole d'hiver Oxydation**, Université Fédérale de Sibérie, Krasnoïarsk, RUSSIE, 7-12 décembre 2015
- I10.** *Mechanical resistance of metal/oxide interface: chemistry and mechanics interaction*, **McMaster/CNRS joint workshop**, McMaster University, Hamilton (ON), 5-7 février 2018
- I11.** *Subcritical crack growth at copper/silica interface*, M. Braccini, M. Kwan, M.W. Lane, G. Ramanath, **Thermec'2018**, Paris, 8-13 juillet 2018
- I12.** *Adhérence de couches obtenues par oxydation thermique d'alliages métalliques*, M. Braccini, V. Parry, C. Pascal, G. Parry, **22^e Journées d'Etude de l'Adhésion (JADH)**, 21-23 septembre 2022, La Turballe (France)
- I13.** *Slow crack propagation at metal/oxide interfaces in multilayer stacks*, M. Braccini, M. Kwan, A. Jain, M.W. Lane, G. Ramanath, **Mois des GT MECAMAT, GT Interfaces**, 5 juin 2023 (distanciel)

Peer review conference papers

PRConf1. *Influence of thermal treatment on partial remelting of Al-Cu alloys*, M. Braccini, L. Salvo, M. Suéry and Y. Bréchet, Proceedings **5th International Conference on Semi-Solid Processing of Alloys and Composites**, Golden, Colorado, 1998, Ed. A.K.Bhasin, J.J.Moore, K.P.Young, S.Midson, pp. 371-378

PRConf2*. *Relation between mushy zone rheology and hot tearing phenomena in Al-Cu alloys* (poster), M. Braccini, C.L. Martin, M. Suéry and Y. Bréchet, **Modelling of Casting, Welding and Advanced Solidification Processes IX**, Aachen, 20-25 August 2000, pp. 18-24

PRConf3. *3D characterisation by X-ray tomography of semi-solid aluminium alloys* (poster), S. Verrier, M. Braccini, C. Josserond, L. Salvo, M. Suéry, P. Cloetens, W. Ludwig, **6th International Conference on Semi-Solid Processing of Alloys and Composites**, Turino, September 2000, pp. 771-776

PRConf4. *Initiation of failure in a single lap joint*, M. Braccini, M. Dupeux, D. Leguillon, **International Conference on Fracture XI**, Turin, Italie, 20-25th March 2005

PRConf5. *Design rules to avoid tunnel cracking in VLSI interconnects during process flow* (poster), H. Brillet, S. Orain, V. Fiori, M. Dupeux, M. Braccini, **EUROSIME**, Berlin, Allemagne, 17-20 avril 2005

PRConf 6. *Channel cracking technique for toughness measurement of SiOCH low-k films* (poster), H. Brillet-Rouxel, M. Dupeux, M. Braccini, S. Orain, **Material Research Society** Proceedings, volume 914, F3.5, 2006

PRConf 7. *Methodology to determine the toughness of a brittle thin film by nanoindentation*, H. Brillet-Rouxel, M. Verdier, M. Braccini, M. Dupeux, S. Orain, **Material Research Society** Proceedings, volume 914, F2.7, 2006

PRConf 8. *Crack initiation in Cu-interconnect structures* (poster), H. Brillet-Rouxel, E. Arfan, D. Leguillon, M. Dupeux, M. Braccini, S. Orain, **Materials for Advanced Metallization**, Grenoble, France, 2006

PRConf 9. *Reactive brazing: The effect of Ti concentration in CuAg-Ti alloys on the microstructure and performances of metal/ alumina joints*, O. Kozlova, R. Voytovych, M-F. Devismes, M. Braccini, N. Shah and N. Eustathopoulos, **LOT**, June 19-21, 2007, Aachen, Germany

PRConf 10. *Cracking behavior of porous C doped ultra low k dielectrics* (poster), S. Maitrejean, M. Braccini, M. Rousseau, M. Verdier, G. Passemard, **Advanced Metallization Conference (AMC)**, October 9-11, 2007, Albany, NY, Materials Research Society, Warrendale, PA, USA, 2008, 717-22 ,

PRConf 11. *Characterization of silicon nitride thin films used as stressor liners on CMOS FETs* (poster), Raymond G. Morin P, Devos A, Hess DA, Braccini M., Volpi F., **9th International Conference on Ultimate Integration on Silicon**, March 13-14, 2008, Udine, Italy, Eds Esseni D; Palestri P; Selmi L, IEEE, Piscataway, NJ, USA, 2008, 199-202

PRConf 12*. *Reactive brazing joint adhesion energy as measured by shaft loaded blister test*, Braccini M., Kozlova O., Eustathopoulos N., Parry G., Devismes M.-F., **12th International Conf. on Fracture**, July 12-17, 2009, Ottawa, Canada

PRConf 13*. *Résistance au cisaillement d'une liaison monobloc CFC/Cu*, Braccini M., Chevet G., Dupeux M., Schlosser J., Martin E., **19^{ème} Congrès Français de Mécanique**, 24-28 août 2009, Marseille, France

PRConf 14*. *Evaluation quantitative de l'adhérence de colles chirurgicales par la technique de gonflement-décollement*, Braccini M., Bidan C., Perrin B., Dupeux M., Von Segesser L.K., **19^{ème} Congrès Français de Mécanique**, 24-28 août 2009, Marseille, France

PRConf 15*. *Surgical Adhesive/Soft Tissue Adhesion Measured by Pressurized Blister Test*, Braccini M., Perrin B., Bidan C., Dupeux M., Biological Materials and Structures in Physiologically Extreme Conditions and Disease, **MRS Spring Meeting 2010**, April 5-9, San Francisco, CA, USA, edited by M.J. Buehler, D. Kaplan, C.T. Lim, J. Spatz (Mater. Res. Soc. Symp. Proc. Volume 1274, Warrendale, PA, 2010), 1274-QQ09-10

PRConf 16. *Patterned Interface Adhesion: Measurements and modeling*, C. Cuminatto, M. Braccini, G. Parry, **8th European Solid Mechanics Conference**, July 9-13, 2012, Graz, AUSTRIA

PRConf 17. *Robust identification of soft tissues constitutive law using digital image correlation*, J. Gillibert, M. Braccini, G. Parry, J. Réthoré, R. Estevez, **8th European Solid Mechanics Conference**, July 9-13, 2012, Graz, AUSTRIA

PRConf 18. *High temperature oxidation of austenitic stainless steels: effect of sulfur content on scale adhesion*, V. Parry, E. Fedorova, C. Pascal, M. Braccini, M. Mantel, D. Oquab, D. Monceau, Y. Wouters, **International Symposium on High Temperature Oxidation and Corrosion ISHOC**, June 23-27, 2014, Hakodate, Hokkaido JAPAN

PRConf 19. *Effect of sulfur content on adhesion of thermal oxide scales grown on austenitic stainless steels*, C. Pascal, E. Fedorova, V. Parry, M. Braccini, M. Mantel, D. Oquab, Y. Wouters, D. Monceau, **European Corrosion Congress Eurocorr**, September 8-12, 2014, Pisa, ITALY

PRConf 20. *Microstructure and mechanical properties of thermal oxides: effect of MnS inclusions in the austenitic stainless steels*, C. Pascal, V. Parry, M. Braccini, E. Fedorova, M. Mantel, D. Oquab, Y. Wouters, D. Monceau, **European Corrosion Congress Eurocorr**, September 6-10, 2015, Graz, AUSTRIA

PRConf 21*. *Relations Between Oxidation Induced Microstructure and Mechanical Durability of Oxide Scales* (poster), V. Parry, C. Pascal, M. Braccini et al., 9th International Symposium on High-Temperature Corrosion and Protection of Materials (**HTPCM**) May 15-20, 2016, Les Embiez (France)

PRConf 22. *Numerical and experimental studies of multiple cracking induced by traction in thermally grown oxide scales*, V. Parry, C. Pascal, M. Braccini, Y. Wouters, E. Fedorova, M. Mantel, G. Parry, **European Corrosion Congress Eurocorr** 11-15 Septembre 2016, Montpellier (France)

PRConf 23. *Development and Application of a Multifunctional Nanoindenter: Coupling to Electrical Measurements and Integration In-Situ in a Scanning Electron Microscope*, S. Comby-Dassonneville, F. Charlot, R. Martin et al., 2019 **IEEE Holm Conference on Electrical Contacts**, 15-18 Sept. 2019 (DOI: [10.1109/HOLM.2019.8923946](https://doi.org/10.1109/HOLM.2019.8923946))

PRConf 24. *Characterisation of dielectric thin films with an electrically-functionalised and SEM-integrated nanoindenter. Focus on failure issues*, M. Rusinowicz, C. Boujrouf, M. Braccini, C. Pascale, G. Parry, D. Pellerin, M. Verdier, F. Volpi, **Materials for Advanced Metallization**, November 16-18 2020 (online)

Other conferences presentations and posters

- Conf1.** *Nouvelles possibilités de la microtomographie en absorption et en contraste de phase*, J.Baruchel, M.Braccini, P.Cloetens, J.P.Guiguay, W.Ludwig, L.Salvo, M.Schlenker, **Journées d'Automne SF2M**, 1998
- Conf2***. *Comportement rhéologique d'alliages Al-8%*pds*Cu à l'état semi-solide*, M.Braccini, C.L.Martin, M.Suéry, A.Tourabi, Colloque National **MECAMAT** 1999, Aussois : Interactions entre Procédés, Microstructure et Propriétés des Matériaux
- Conf3.** *Connectivity in semi-solid alloys during thermal treatment and mechanical deformation using X-ray tomography*, L.Salvo, M.Braccini, C.Josserond, M.Suéry, W.Ludwig, P.Cloetens, J.Baruchel, **ESRF User's Meeting** (1999), Materials Science at 3rd Generation Synchrotron Radiation Facilities
- Conf4***. *Effect of grain refiner on the hot tearing sensibility of Al-Cu alloys*, M. Braccini, C.L. Martin, M. Suéry and Y. Bréchet, **Junior Euromat** 2000, 25 August-1 September 2000, Lausanne (Suisse)
- Conf5***. *Effet des caractéristiques physico-chimiques et du mode de sollicitation sur la tenue mécanique d'interface résine époxyde/acier inoxydable*, M. Braccini, M. Dupeux, J. Laurencin, A. Benkassa, N. Pot, F. Dorval, **12^{ème} Journées d'Etude sur l'Adhésion**, Ile d'Oléron, 29 sept. – 3oct. 2003, pp. 51-54
- Conf6***. *Fissure à une interface acier inoxydable/résine époxyde* (poster), M. Braccini, J. Laurencin, M. Dupeux, D. Leguillon, **Ecole d'été MEALOR**, Roscoff, 12-24 juillet 2004
- Conf7***. *Amorçage et propagation d'une fissure à une interface acier inoxydable/résine époxyde*, M. Braccini, J. Laurencin, M. Dupeux, D. Leguillon, **1^{ère} journées FFM**, Limoges, 26-28 oct. 2004
- Conf8.** *Mécanismes de rupture d'une couche mince fragile sur un substrat ductile : méthodologie de discussion*, M. Dupeux, F. Toscan, A. Galerie, M. Braccini, **1^{ère} journées FFM**, Limoges, 26-28 oct. 2004
- Conf9.** *Comparaison des seuils et énergie d'adhérence obtenus par différents essais sur des revêtements de cuivre projeté par plasma sur substrat d'aluminium*, M. Arrigoni, M. Boustie, M. Braccini, M. Dupeux, S. Barradas, M. Jeandin, C; Bolis, L. Berthe, **1^{ère} journées FFM**, Limoges, 26-28 oct. 2004
- Conf10***. *Rôle des singularités dans l'amorçage de fissures aux interfaces solide/solide*, M. Braccini, M. Dupeux, D. Leguillon, H. Brilllet, E. Arfan, **J2im**, les Issambres, 13-15 juin 2005
- Conf11.** *Mise en œuvre d'un test d'adhérence: application aux barrières thermiques pour aubes de turbine* (poster), P.-Y. Théry, M. Poulain, M. Dupeux, M. Braccini, **J2im**, les Issambres, 13-15 juin 2005
- Conf12.** *Mesure d'énergie d'adhérence d'une couche métallique plastique sur un substrat céramique par gonflement-décollement*, C-Y Lee, M. Dupeux, W-H Tuan, M. Braccini, Colloque "**Plasticité 2006**", Sevrier, 26-28 Mars 2006.
- Conf13.** *Etude de l'adhérence des systèmes barrière thermique pour aubes de turbine*, P-Y Thery, M. Poulain, M. Braccini, M. Dupeux, 2^{ème} Colloque National "**Matériaux 2006**", Dijon, 13-17 Novembre 2006
- Conf14.** *Adhesion Energy of a YPSZ EBPVD Layer in Two Thermal Barrier Coating Systems* (oral), They P.-Y., Poulain M., Dupeux M., Braccini M., **ICMCTF**, April 23-27, 2007, San Diego CA, paper A3-1-5

Conf15. *Characterisation of silicon nitride thin films used as stressor liners on CMOS FETS: measurement of Young's modulus and hardness*, G. Raymond, P. Morin, E. Laffosse, D. Hess, M. Braccini, F. Volpi, **Journées Annuelles de la SF2M**, 30mai – 1^{er} juin 2007, Saint Etienne

Conf16*. *Caractérisation du comportement en rupture de couches de diélectriques utilisés dans les interconnexions pour la micro-électronique*, M. Braccini, H. Brillet-Rouxel, M. Verdier, M. Dupeux, S. Orain, **Journées Annuelles de la SF2M**, 30mai – 1^{er} juin 2007, Saint Etienne

Conf17*. *Mechanical Properties of Alumina/Copper Brazed Joints: Reactive Versus Non-reactive Brazing*, O. Kozlova, M. Braccini (Sp); M.-F. Devismes; N. Eustathopoulos, **EUROMAT**, September 10-13, 2007, Nurmberg, Germany

Conf18. *Adhesion Degradation of a YPSZ EBPVD Layer in Two Thermal Barrier Coating Systems*, P.-Y. Thery, M. Poulain, M. Dupeux, M. Braccini, **EUROMAT**, September 10-13, 2007, Nurmberg, Germany

Conf19. *Characterisation of silicon-nitride thin films used as stressor liners on CMOS FETS* (poster), G. Raymond, P. Morin, A. Devos, D.A. Hess, M. Braccini, F. Volpi, Innovation on Thin Films Processing and Characterisation (**ITFPC**), Nov. 20-23 2007, Nancy, France

Conf20. *Microstructural characterization and determination adhesion of 100Cr6 steel coatings thermally sprayed on a 35CrMo4 substrate* (poster), M. A. Bradai, M. Braccini, A. Ati, N. Bounar and A. Benabbas, 3^{ème} Rencontres Internationales sur la Projection Thermique (**RIPT**), 6-7 Décembre 2007, Lille (France)

Conf21. *Characterization of silicon nitride thin films used as stressor liners on CMOS FETs*, G. Raymond, P. Morin, A. Devos, J.P. Gonchond, M. Braccini, F. Volpi, **E-MRS** 2008 Spring Meeting, May 26 – May 30, 2008, Strasbourg, France

Conf22*. *Brazing of copper to alumina by reactive CuAgTi alloys*, Kozlova O., Braccini M., Eustathopoulos N., Devismes M.-F., **4th Int. Brazing and Soldering Conf.**, April 26-29, 2009, Orlando, Florida, USA

Conf23. *Influence of interfacial reaction layers on the mechanical assemblies bimetallic light alloys (Al or Mg) / reinforcements (Fe or Ti)*, M. Zhe, O. Dezellus, F. Bosselet, M. Braccini, J.C. Viala, **EUROMAT**, Sept. 7-10, 2009 Glasgow, UK

Conf24. *Damage prediction of carbon fiber composite armoured actively cooled plasma-facing components under cycling heat loads*, Chevet G., Herb V., Schlosser J., Martin E., Camus G., Braccini M., Courtois X., Escourbiac F., Missirlian M., **12th International Workshop on Plasma-Facing Materials and Components for Fusion Applications**, MAY, 2009 Julich, GERMANY

Conf25. *Propagation d'une fissure dans une interface entre des lignes de polymère et un substrat rigide*, C. Cuminatto, G. Schelcher, G. Parr, F. Parrain, M. Braccini, **MATERIAUX 2010**, Nantes, 18-22 octobre 2010

Conf26*. *Adhérence de colles chirurgicales sur un tissu mou*, L. Fanton, B. Perrin, M. Braccini, **MATERIAUX 2010**, Nantes, 18-22 octobre 2010

Conf27. *Crack propagation at BCB-Si patterned interface: mechanical characterization and modeling*, C. Cuminatto, G. Schelcher, G. Parry, F. Parrain, M. Braccini, **Euromat 2011**, Montpellier, 12-15 septembre 2011

Conf28. *OXYGENE project - summary*, K. Kanawka, S. Hody, J. Laurencin, V. Roche, M. C. Steil, M. Braccini, D. L guillon, **European Fuel Cell Forum**, 2012

Conf29. *Modelling patterned interface adhesion*, C. Cuminatto, G. Parry, M. Braccini, **13^{ mes} Journ es de la Mati re Condens e**, Montpellier, 27-31 ao t 2012

Conf30. *Measuring and modelling patterned BCB/Si interface adhesion*, C. Cuminatto, G. Parry, M. Braccini, **EURADH 2012**, 9th European Adhesion Conference, Friedrichshafen, Lake Constance, Germany, 16 – 20 September 2012

Conf31. *High Temperature Oxidation of Austenitic Stainless Steels in Relation with the Oxide/Metal Interfacial Behaviour During Tensile Test*, E. Fedorova, M. Braccini, D. Monceau, D. Oquab, V. Parry, M. Mantel, C. Pascal, Y. Wouters, **International Symposium on the Reactivity of Solids ISRS-18**, June 9-13, 2014, Saint Petersburg, RUSSIA

Conf32. *Effet de la teneur en soufre d'aciers aust nitiques sur l'adh rence des couches d'oxyde thermiques*, C. Pascal, V. Parry, M. Braccini, Y. Wouters, E. Fedorova, D. Oquab, D. Monceau, M. Mantel, **CEFRACOR**, 11 d cembre 2014, Paris, FRANCE

Conf33. *Oxydation   haute temperature d'aciers aust nitiques : Effets de la teneur en soufre alli  sur la microstructure et l'adh rence des couches d'oxydes*, C. Pascal, V. Parry, E. Fedorova, M. Braccini, D. Oquab, D. Monceau, Y. Wouters, M. Mantel, **46^{ mes} Journ es d'Etude sur la Cin tique H t rog ne JECH**, 2-3 Avril, 2015, Grenoble, FRANCE

Conf34. *Damaging behavior and numerical analysis of residual thermal stress in oxide scales grown on austenitic stainless steels*, E. Fedorova, A. Burov, V. Parry, C. Pascal, M. Braccini, D. Oquab, M. Mantel, Y. Wouters, D. Monceau, **46^{ mes} Journ es d'Etude sur la Cin tique H t rog ne JECH**, 2-3 Avril, 2015, Grenoble, FRANCE

Conf35. *Experimental and numerical study of multiple cracking of thermally grown oxides induced by tensile tests*, V. Parry, C. Pascal, M. Braccini, Y. Wouters and G. Parry, **High Temperature Corrosion Gordon Research Conference**, July 26-31, 2015, New London, NH, USA

Conf36*. *Fatigue behavior at copper-silica interfaces* (poster), M. Braccini, M. Kwan, M. Lane, G. Ramanath, **Hudson Mohawks AVS Chapter**, April 20, 2015, Albany, NY, USA

Conf37. *Relationship between microstructure and mechanical behavior of oxide scale grown on austenitic stainless steel: Effect of alloyed sulfur*, C. Pascal, V. Parry, M. Braccini, M. Mantel, Y. Wouters, E. Fedorova, D. Oquab, D. Monceau, **High Temperature Corrosion Gordon Research Conference**, July 26-31, 2015, New London, NH, USA

Conf38. *High temperature cyclic oxidation of austenitic stainless steels in relation with the oxide scale damaging behaviour during tensile test*, E. Fedorova, D. Monceau, M. Braccini, C. Pascal, V. Parry, D. Oquab, N. Nikolaeva, Y. Wouters, M. Mantel, **EFC-Workshop: Insight, mechanisms and modelling in high temperature corrosion**, 28-30 October, 2015, Dechema-Haus, Frankfurt, GERMANY

Conf39. *Numerical and experimental studies of traction induced multiple cracking on thermally grown oxide scale*, V. Parry, C. Pascal, M. Braccini, Y. Wouters, E. Fedorova, M. Mantel, G. Parry, **EFC-Workshop: Insight, mechanisms and modelling in high temperature corrosion**, 28-30 October, 2015, Dechema-Haus, Frankfurt, GERMANY

Conf40*. *Caractérisation par DIC et modélisation par zones cohésives du comportement mécanique des interfaces*, M. Azab, R. Estevez, G. Parry, M. Braccini, J. Rethoré, **Colloque Corrélation d'images DIC-Alpes**, Grenoble, 8 décembre 2016

Conf41*. *Comportement en fatigue d'interfaces cuivre-silice* (Poster), M. Braccini, M. Kwan, M. Lane, G. Ramanath, **JADH 19e** Journées d'Etude sur l'Adhésion, 8-13 octobre 2017, Sainte Maxime (France).

Conf42*. *Comportement en fatigue d'interfaces cuivre-silice* (Poster), M. Braccini, M. Kwan, M. Lane, G. Ramanath, **Journées d'Automne SF2M**, 23-25 octobre 2017 Lyon (France).

Conf43. *Fragilité des aciers inoxydables ferritiques 18Cr 2Mo* (Poster), L. Jacquet, M. Braccini, N. Meyer, R. Estevez, M. Mantel, **Colloque MECAMAT Aussois**, 21-25 janvier 2019, Aussois (France).

Conf44. *Fragilité des aciers inoxydables ferritiques 18Cr 2Mo* (Poster), L. Jacquet, M. Braccini, N. Meyer, R. Estevez, M. Mantel, **La Métallurgie, Quel Avenir !**, 8-12 avril 2019, Nancy (France).

Conf45. *Fragilité des aciers inoxydables ferritiques 18Cr 2Mo*, L. Jacquet, N. Meyer, M. Braccini, R. Estevez, M. Mantel, **Journées Annuelles de la SF2M**, 21-23 octobre 2019, Paris (France).

Conf46. *Silicon nanonet, a promising material for flexible and large-scale electronics*, T. Arjmand, M. Braccini, T. Nguyen, M. Bawedin, B. Salem, F. Volpi, C. Ternon, **EUROMAT**, 12-16 September 2021, Graz (Austria)

Conf47. *Identification des propriétés mécaniques et électriques d'oxyde thermique de cuivre par nanoindentation-résistive*, Morgan RUSINOWICZ, Fabien VOLPI, Chaymaa BOUJROUF, Marc VERDIER, Guillaume PARRY, Muriel BRACCINI, **Indentation 2021**, 13-15 octobre 2021, Lorient (France)

Conf48. *Failure of a brittle layer on a ductile substrate: Nanoindentation experiments and FEM simulations*, M. Rusinowicz, G. Parry, F. Volpi, D. Mercier, S. Eve, U. Lüders, F. Lallemand, M. Choquet, M. Braccini, C. Boujrouf, E. Hug, R. Coq Germanicus, M. Verdier, **Journées Annuelles SF2M**, 26-28 octobre 2021, Caen (France)

Conf49. *Electro-mechanical behaviour of semiconducting nanonets*, Shruti Sharma, Fanny Morisot, Tabassom Arjmand, Muriel Braccini, Fabien Volpi, Céline Ternon, **CIMTEC**, 20-29 June 2022, Perugia (Italy)

Conf50. *Mechanical and electrical properties of copper oxide layers measured by in situ SEM resistive nanoindentation*, Morgan RUSINOWICZ, Fabien VOLPI, Chaymaa BOUJROUF, Marc VERDIER, Guillaume PARRY, Muriel BRACCINI, 11th **European Solid Mechanics Conference**, 4-8 July 2022, Galway (Ireland)

Conf51. *Study of piezoelectric behaviour of semiconducting nanonets*, Shruti Sharma, Tabassom Arjmand, Fanny Morisot, Muriel Braccini, Fabien Volpi, Céline Ternon, **Future Materials**, October 3-5, 2022, Rome (Italy)

Conf52. *Development and characterization of a Cu₂O nanonet as a p-type TCO for opto-electronics applications*, Mouncef Belmouhoub, Gabin Ternin-Rozat, Muriel Braccini, Jean-Luc Deschanvres, Hervé Roussel, Céline Ternon, **Future Materials**, October 3-5, 2022, Rome (Italy)

Seminars and workshops

S1. *Rhéologie des alliages à l'état pâteux* (oral), **Centre Technique des Industries de la Fonderie** (C.T.I.F.) Sèvres, novembre 1998

S2. *Comportement rhéologique d'alliages Al-8%Cu à l'état pâteux* (oral), **laboratoire GPM2**, Grenoble, mai 1999

S3. *Hot tearing in Al-Cu alloys*, **McMaster University**, ON, Canada, août 2001

S4. *Comportement mécanique de matériaux hétérogènes : rhéologie d'alliages Al-Cu en cours de solidification et plasticité de matériaux composites* (oral), **LTPCM**, novembre 2001

S5. *L'essai de gonflement-décollement pour la caractérisation des films minces et de leur adhérence*, **Centre de Recherche St Gobain**, Aubervilliers, 5 novembre 2009

S6. *Solid-solid interfaces adherence: chemistry/geometry/mechanics relationship*, Materials Science and Engineering Department seminar, **Rensselaer Polytechnic Institute**, Troy, NY, USA, February 2014

S7. *Relation entre microstructure et durabilité mécanique de couches d'oxydes thermiques*, M. Braccini, V. Parry, C. Pascal et al., **Journée Technique Pôle AXELERA**, Solaize, 6 décembre 2016

S8. *Mechanical properties of metal/oxide interface*, **Séminaire LMGP**, Grenoble, 13 juin 2017

S9. *Propriétés à rupture dans les systèmes oxyde/métal*, **wébinaire du GdR COncORD**, 8 septembre 2020 (<https://www.youtube.com/watch?v=0GO2mcf4SQA>)

Books

B1. *Mécanique des interfaces solides*, M. Braccini, M. Dupeux, traité MIM, éd. Hermès-LAVOISIER, 2012

B2. *Mechanics of solid interfaces*, M. Braccini, M. Dupeux, ISTE-Wiley, 2012

Book chapters

Chap1. *High resolution X-ray tomography applied to the study of materials in the semi-solid state* S. Verrier, M. Braccini, C. Josserond, L. Salvo, M. Suéry, W. Ludwig, P. Cloetens, J. Baruchel, X-Ray Tomography in Material Science, 2000, ed. J.-Y. Buffière, E. Maire, P. Merle, G. Peix and J. Baruchel, publ. Hermes Science, pp. 77-87

Chap2. *Mechanical behavior of thermal oxide on stainless steels*, V. Parry, S. Chandra-Ambhorn, T. Nilsonthi, M. Braccini, in High temperature corrosion of stainless steels: An Alain Galerie Festschrift, 2020, Trans Tech Publications Ltd., (DOI: www.scientific.net/SSP.300.25)