

Antonella Motta
Curriculum Vitae

Department of Industrial Engineering, 09/G2, ING/IND34 (Industrial Bioengineering)

PERSONAL INFORMATION

Antonella Motta

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hIndexes: WebOfScience: 42 **Google Scholar :** 48

National Scientific Qualification to Full Professor, Scientific Sector ING/IND34 (Industrial Bioengineering): March 2018

EDUCATION

- 2001 PhD in Biomaterials, Department of Materials Engineering and Industrial Technologies, Faculty of Engineering, University of Trento, Trento, Italy.
- 1988 Degree in Natural Science, Faculty of NNFFMM Sciences, University of Padova, Padova, Italy, 110 /110 cum laude.

CURRENT POSITION(S)

- 01/02/2020-present Full Professor in Industrial Engineering, University of Trento, Trento, Italy
- 2014 –present Associate Director of Bioactive Resources for Innovative Clinical Applications Research Unit (BRICAR), Chulalongkorn University, Bangkok, Thailand
- 2018-present Chair of BIOtech Research Center, Dpt. Industrial Engineering, University of Trento, Trento, Italy
- 1/04/21-31/03/2022 Visiting Professor at Medical School, National University of Malaysia, Malaysia

PREVIOUS POSITIONS

- 01/10/2014-31/01/2020 Associate Professor in Industrial Bioengineering
Department of Industrial Engineering (DII), University of Trento Italy.
- 20/01/2005-30/09/2014 Assistant Professor, Department of Industrial Engineering (DII), University of Trento, Italy
- 20/01/2001-19/01/2005 Post-doc, Department of Materials Engineering and Industrial Technologies (DIMTI), University of Trento, Italy
- 01/11/1997-17/01/2001 PhD student, Department of Materials Engineering and Industrial Technologies (DIMTI), University of Trento, Italy
- 01/07/1996-30/11/1999 Researcher, Experimental Silk Institute, Via Colombo 9, Milan, Italy

FELLOWSHIPS AND AWARDS

- 01/06/1991-30/06/1996 Research fellow, Experimental Silk Institute, Via Colombo 9, Milan, Italy
- 01/02/1991-30/05/1991 Research fellow, Chemical Engineering, Polytechnic of Milan, Piazza L. da Vinci, Milan, Italy

15/11/2014

Gold Medal for the project entitled “SilkHeal®: 3D Wound Dressing for Healing Promotion with Antimicrobial Activity” from the 63rd Brussels Eureka: The Belgian and International Trade Fair for Technological Innovation, 13th-15th November 2014, Brussels, Belgium.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2001–

Supervisor of:

-about 25 bachelor students (Degrees in Industrial Engineering and in Biomolecular Sciences and Technology, University of Trento, Italy);

-about 50 master students (Degrees in: Materials Engineering, Materials, Mechatronics and Systems Engineering, Physics and Biomedical Technologies, Cellular and Molecular Biotechnologies, University of Trento, Italy; Bioengineering, University of Padua, Italy; Chemical School, University of Bicocca, Milan, Italy; Chemical School, University of Trieste, Italy; Bioengineering, 3Bs Institute, University of Minho, Braga, Portugal; Bioengineering, Keele University, Keele, UK; Mechanical Engineering and Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand; Environmental Engineering, University of Shanghai, Shanghai, China; QUT Brisbane, Australia.

-about 40 PhD students (Degrees in: Materials Engineering, Materials, Mechatronics and Systems Engineering, Biomolecular Sciences, University of Trento, Italy; Tissue engineering and regenerative medicine, 3Bs Institute, University of Minho, Braga, Portugal; Bioengineering, Keele University, Keele, UK; Queensland University, Brisbane, Australia; Bioengineering and Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand; Biomaterials and biomedical technologies, University of Shanghai, Shanghai, China; Hanoi University of Science and Technology, Hanoi, Vietnam; Biomedical Technologies, University of Texas at Arlington, Arlington, TX, USA; Mechanical Engineering, University of Colorado at Boulder, CO, USA (double PhD, 2 students);

-8 Postdocs.

TEACHING ACTIVITIES

Course teaching:

15/02/2005-

Principles of Bioengineering, Master degree in Materials and Production Engineering, Department of Industrial Engineering, University of Trento, Italy.

15/02/2012-

Tissue Engineering and Regenerative Medicine, Master Degrees in Cellular and Molecular Biotechnologies and in Computational Biology, C.I.B.I.O., University of Trento, Italy.

01/11/2005-

Biodesign Applied to Tissue Engineering, International Doctorate in Materials, Mechatronics and Systems Engineering, Department of Industrial Engineering, University of Trento, Trento, Italy (12 hours).

01/11/2001-30/10/2008

Principles of Biocompatibility, Degree in Physics and Biomedical Technologies, Physics School, University of Trento, Italy.

15/02/2005-30/10/2006

Biophysics, Degree Physics and Biomedical Technologies, Physics School, University of Trento, Italy.

01/02/2005-30/01/2009

Dental Materials, Bachelor in Dentistry, Medical School, University of Verona, Italy.

Other Teaching activities and short courses:

01/11/1994-30/10/1997

Lectures on “Biocompatibility and introduction to biology”, course in Biomaterials, Biomedical Engineering, Polytechnic of Milan, San Raffaele, Segrate, MI, Italy.

01/11/1998-30/10/2000

Lectures on “Materials/Biology interactions” in “Biomaterials I”, Biomedical Engineering, Polytechnic of Milan, Italy.

03/05/2004	“Biomaterials for regenerative medicine” Workshop: Course on Stem cells and progenitors in clinical tissue engineering applications. Organized by University of Milan, Istituto Sperimentale Zooprofilattico of Brescia, Associazione Italiana Colture cellulari-Onlus, with credits recognized by Ministero della Salute "Permanent education in medicine" (ECM) program for medical school, veterinary school, biological sciences, Brescia, Italy.
01/02/2000-30/01/2005	Lectures on “Materials/biology interactions” in the Course on “Dental Materials”, Medical School, University of Verona, Italy.
2000-	Lectures at the International Annual Summer Schools on Biomaterials and Tissue Engineering.
10-12/04/2007	Lectures on “Adsorbed protein detection” and “ SEM-ESEM: Biocompatibility and Material evaluation”, EXPERTISSUES Course “Bulk, surface and biological characterization of biomedical materials”. 10-12 April 2007, Trento, Italy.
May 2007	Lectures on “Materials/biological environment interactions”. Second level master on Biomaterials, University of Siena, Siena, Italy.
22/06/2009	Lecture on “Polymeric materials and composites of natural origin”. INVENTS Practical Course on polymers and Drug Delivery. CSIC Instituta de Ciencia y Tecnologia de Polimeros, Madrid, Spain.
06-07/07/2009	“Device hemocompatibility” e principles of Biocompatibility”. 4 hours. "SHORT MASTER on plastic materials " module 6: "Materials for medical applications”, Mirandola (MO), Italy.
30-31/08/2010	Organizer and speaker of Crash Course, 6 hours on “Tissue-materials interactions” at Chulalongkorn University, Mechanical Engineering, Bangkok, Thailand.
07/03/2011	“Biocompatibility principles”” and “Medical device hemocompatibility”. Short Master on “Plastic materials for industrial products”, module 6 “Materials for biomedical applications”, Mirandola (MO), Italy.
16/01/2011	“Functional in vitro imaging: LM, SEM, ES”, Expertissues Winter School, Radstadt, Salzburg, Austria.
12/10/2013	"Biologically inspired materials". Term Stem International School 2013. Porto, Portugal.
08-10/10/2014	"Silk, a sustainable source for advanced tissue engineering applications". Curso Internacional en ingenieria de tejidos, medicina regenerative y nuevos matreiales para el diseno de sistemas de liberacion en enfermedades de alto impacto socioeconomic. Bogota', Colombia.
17-19/11/2014	"Instructive scaffolds to modulate stem cells behavior". BIOMAT 2014, IV Curso Internacional de Biomateriales, L'Havana, Cuba.
02/11/2015	"Possibility for a fast track in the transition of new nature-derived biomaterials into clinic". Workshop on: "Biomedical technologies and Materials". Swap and Transfer Erasmus Mundus project, Chulalongkorn University, Bangkok, Thailand.
08/09/2016	"Nature as a source for sustainable polymers for advanced biomedical applications". Workshop: Use of natural resources for biomedical or other added value applications. Erasmus Mundus alumni seminar. Ulaanbaatar, Mongolia.
21-25/11/2016	“Polymers designed by nature: rational, strategies, processing". Chem2nature, First school, 21-25 November 2016. Avepark – Guimaraes-Portugal.
06-08/02/2017	“Biocompatibility: metamorphosis of a concept”, Summer School in BioNanotechnology and Biomedical Engineering. Charles Perkins Centre, The University of Sydney, Australia.

CONFERENCES

Plenary Lectures

- 29/10/1997 "Natural and synthetic polymers in medicine. Biostability and biocompatibility aspects". 2nd NISES/COE International Symposium, Tsukuba Center, Ibaraki, Japan.
- 23/10/2009 "Silk-based materials for biomedical applications". Encuentro latino Americano de la seda. X Jornadas Nacionales de Sericultura. Instituto Nacional de Tecnologia Industrial INTI, Buenos Aires, Argentina.
- 12/06/2014 "Natural-derive polymers for tissue engineering strategies". TERMIS-EU 2014, Genova, Italy.

Several Keynote Lectures, Invited lectures and plenary at national and International Conferences, Schools and Universities over the world.

About 100 presentations in international conferences with abstract publication

ORGANIZATION OF SCIENTIFIC MEETINGS

- 2007 Co-organizer of 1st Trento Innovation Conferences on Materials Engineering (TICME), "Biomaterials and Composite Materials", Trento, Italy. About 170 participants.
- 2011 Co-organizer of 2nd Trento Innovation Conferences on Materials Engineering (TICME), "Materials for energy, environment Trento, Italy. About 90 participants.
- 2015 Co-organizer of Frontiers in Biomedical Polymers (FBPS) Symposium, Riva del Garda, Trento, Italy. About 120 participants.
- 2018 Co-organizer of the symposium on "Biomedical materials", "GNB 2018 - Sixth Congress of the National Group of Bioengineering, Milan, Italy.
- 2018 Co-organizer of the Symposium on: Development and manufacture of silk-based medical devices: from basic systems to clinical use. TERMIS-World 2018, Kyoto, Japan.
- 2019 Co-organizer of the International Conference "Frontiers in Silk Science and Technologies", and 3rd Trento Innovation Conferences on Materials Engineering (TICME), Trento, Italy, 12-15 June 2019. 130 participants.
- Forthcoming events:
- 2023 Co-Chair of Gordon Research Conference on: Silk proteins and the transition to biotechnologies. First Conference 15-20 August 2021, New England, USA. (postponed to 2023)

INSTITUTIONAL RESPONSIBILITIES

- 01/10/2018- Responsible of the BIOtech Research Center and of the Biomaterials&Biomedical Technologies laboratory, Department of Industrial Engineering (DII), University of Trento Italy.
- 2008 – Member of the International PhD School, University of Trento/ Department of Industrial Engineering/ Italy.
- 2006 – DII NEWS Editorial Board, University of Trento

EDITORIAL ACTIVITIES

- 2010- Member of Editorial Board of: Journal of Applied Biomaterials and Biomechanics, and TERM Journal
- 2014 – Associate Editor of Journal of Bioactive and Compatible Polymers.
- 2016 – Co-Editor-in Chief of Journal of Biomaterials Science, Polymer Edition.
- 2020- Associate Editor of Frontiers Bioengineering

REVIEWING ACTIVITIES AND EVALUATION PANELS

- 2003 – Referee for International Journals in the Biomaterials and Biomedical Technologies field: Biomaterials, Biomacromolecules, Acta Biomaterialia, Science, Journal of Bioactive and Compatible Polymers, Tissue Engineering A and B, Journal of Biomaterials Science, Science, TERM Journal, PlosOne, Journal of Biomedical materials Research: Part A, Advanced Materials, Critical Reviews in Biotechnology, Cytotherapy, Colloids and Surfaces B: Biointerfaces, International Journal of Cardiology, Biotechnology & Bioengineering, European Journal of Pharmaceutics and Biopharmaceutics.
- 2009 – Referee for ERC projects, PRIN, Israel Science Foundation, NWO Wotro Science for Global Development - Innovation Research Incentives Scheme Vici, legge Provinciale 6, PAT
- 2017- Member of Evaluation Panel, process of the Stimulus of Scientific Employment, Individual Support - Call. Fundação para a Ciência e a Tecnologia, I. P. (FCT) - the Portuguese public funding agency for R&D
- 2007 – Member of the International Advisory Committee of European Society on Biomaterials (ESB)
- 2010 – Reviewer of PhD thesis: 3Bs Institute, University of Minho, Braga, Portugal; Ludwig Boltzman Institute, Vienna, Austria; Nano Institute, Health and Medicine, University of Sydney, Australia; Institute for Frontier Materials, Deakin University, Melbourne, Australia; Indian Institute of technology, Department Bioscience and Bioengineering, Guwahati, India; Mechanical Engineering and Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand.
- 2018- FCT (Fundacao para a Ciencia e la Tecnologia) evaluation panel: Medical and Engineering and Biotechnology Panel.
- 2021- Member of ERC consolidator grant LS7 Committee Panel

MEMBERSHIPS OF SCIENTIFIC SOCIETIES/INSTITUTIONS

- 2005- Member of: National Institute of materials Science and Technology (INSTM); Tissue Engineering and Regenerative Medicine International Society (TERMIS)
- 2009 – Member, European Institute of excellence on Tissue Engineering and Regenerative Medicine
- 2009- Member of the European Council of TERMIS
- 2014- Scientific Committee member, TERMIS-European Congress 2014, Genova, Italy. About 800 participants
- 2015- Scientific Committee member of European Society of Biomaterials (ESB) Congresses
- 2017- Chief of the Endorsement Council of TERMIS

MAIN SCIENTIFIC COLLABORATIONS

Scientific collaborations with National and International Institutes:

University of Connecticut Institute of Materials Science (USA); Tufts University, Bioengineering Center, Boston (MA), USA; Dept. of Mechanical Engineering, University of Colorado at Boulder, (CO), USA; University of Brighton, School of Pharmacy (UK); Georgia Institute of Technology, Institute of Biosciences and Bioengineering, Atlanta (USA); CSIC, Madrid (S); The Hebrew University of Jerusalem (Israel); University of Mainz (D); Chulalongkorn University, Chemical Engineering and Pharmaceutical Sciences, Bangkok, Thailand; University of Minho, Braga, Portugal; Burapha University, Bangsaen, Thailand; Institute for Biomechanics, Swiss Federal Institute of Technology, ETH Zurich (CH); Department of Chemical Engineering, Hacettepe University, Ankara (T); Research Institute for Science and Technology in Medicine, Keele University (UK); Università di Napoli Federico II (Italy); Università di Siena (Italy); Istituto Sperimentale Zooprofilattico di Palermo (I); Istituto Ortopedico Rizzoli, laboratorio di Ingegneria dei Tessuti, Bologna (I);

RESEARCH TOPICS

- Nanostructured materials for biomedical applications (e.g., cartilage, myocardium, bone, brain, ligament, nerve...)
- Interaction between implants materials, proteins and cells;
- Principles and applications of tissue engineering;
- Bioactive materials;

- Immobilization of proteins and cells, adhesion mechanisms;
- Anti-thrombogenic materials;
- Chemical-physical and biological characterization of materials for biomedical applications;
- Quality evaluation of implantable materials;
- Surface modifications of materials for biomedical uses;
- Natural-derived polymers: isolation and processing;
- Protocols and methods for in vitro evaluation of cell stress after encapsulation in hydrogels (organ printing);
- Silk derived materials, processing and bioactive chemical modifications;
- Biopolymers isolated from sea organisms for biomedical applications.

RESEARCH PROJECTS

Unit Researcher: Project PRIN 1999: Polymeric structures of fibroin and synthetic polymers for engineering applications. 24 months.

Local principal Investigator: COST European project "Improvement of Medical Devices in Clinical Practice from the Failure of the Explanted Prostheses Analysis". 24 months.

Unit Researcher: Project PRIN 2001: Structured biomaterials for Tissue Engineering applications. 24 months.

Unit Researcher: Project PRIN 2003: Injectable Bioactive hydrogels for orthopedic applications 24 months.

Responsible of the in vivo Evaluations: PAT 2006: Nanosmart, Smart nanoparticles for imaging, detection and therapy of cancers. 48 months.

Unit Researcher: European Network of Excellence - Expertissues 60 months. 2007-11.

Responsible of Research Unit: Ricerca Finalizzata IZI-2007-634467: Adult mesenchymal stem cells: differentiative lineages and applications in autologous and allogenic implantation and tissue remodeling. 24 months.

Unit Researcher: Project PRIN 2007: Protein immobilization in nano cavity obtained by breath figures approach. 24 months.

Responsible of INSTM Unit: Project CARITRO 2007-08: BIONECT - Novel Electrochemical Organic Transistors for Biosensing. 24 months.

Unit Researcher: Project PRIN 2009: Template obtained by breath figures technique. 24 months.

Scientific responsible: Project CARITRO 2012: Multicomponent resorbable scaffold with selective releasing of biomolecules for vascular tissue engineering. 24 months.

Scientific Responsible Trento Unit: Project PE-2011-02348395: "Novel approach for bone regeneration and repair using sulfur donor-basde therapy". Ministero della Salute, Bando 2011-2012 Progetti di Ricerca- progetto completo. Research Type: Biomedical. Italian researcher abroad. 36 months, started: 5/12/2014.

Responsible of Trento Unit Isolpharm_AG: 2017-2019. New ISOL-production method of high specific activity beta-emitting radionuclides as radiopharmaceutical precursors.

Coordinator of "REMIX" project, Horizon 2020, CALL: H2020-MSCA-RISE-2017, (Marie Sklodowska-Curie Research and Innovation staff Exchange), Type of action: MSCA-RISE, proposal number 778078. 2017-2021.

Coordinator of "SHIFT" project, Horizon 2020, CALL; H2020-MSCA-RISE 2019. Type of action: MSCA-RISE, proposal number 101008041. Starting data 01/09/2021.

START UP

2010-2018 Founder of Bio Tools s.r.l.

VISITING SCIENTIST

- Visiting Scientist c/o Tufts University, Bioengineering Centre, Medford, USA, February-June 2000, November-December 2004, October-November 2006;
- Visiting Scientist c/o University of Brighton, School of Pharmacy, Brighton, UK,

2000 e 2001;

- Visiting Scientist c/o University of Connecticut, Institute of Materials Science, Storrs, CT, USA, Nov-Dec. 2001;
- Visiting Scientist c/o Georgia Institute of Technology, Parker H. Petit Institute for Bioengineering and Bioscience, (IBB); Atlanta, GA, USA, October-November 2007;
- Visiting Scientist c/o University of Colorado, Mechanical Engineering Institute; Boulder, CO, USA, January-February 2009;
- Visiting Scientist c/o Burapha University, Marine Science Institute, Bangsaen, Thailand, September 2010;
- Visiting Professor at Tufts University, Bioengineering Center, Medford, MA, USA, December 2011-February 2012;
- Visiting Professor c/o University of Texas at Arlington, Materials Science and Engineering, Arlington, TX, USA, 25/01/2013 to 25/02/2013;
- Visiting Professor c/o Chulalongkorn University, Chemical Engineering, Bangkok, Thailand, December 2014-January 2015, January 2017, January 2018 and January 2019;
- Visiting Professor c/o Virginia Commonwealth University, Department of Chemical and Life Science Engineering, Richmond, VA, USA January 2016;
- Visiting Professor and teaching activity (Erasmus+ program) c/o University of Colorado at Boulder, Mechanical Engineering, Boulder, CO, USA, February 2016;
- Visiting Professor at University of Texas at Arlington, Materials Science and Engineering, Arlington, TX, USA, February 2016;
- Visiting Professor and teaching activity (Erasmus+ program) c/o Chonbuk University, Department of Polymer Nano Science & Technology, Jenjou, South Korea, October 2018.

Publications

Books:

1. Co-Editor of: "Scaffolds for Tissue Engineering: Biological Design, Materials, and fabrication". Edts: C. Migliaresi and A. Motta. Pan Stanford Publishing Pte. Ltd. ISBN: 978-981-4463-20-1. 2014.
2. Co-Editor of Biomimicked Biomaterials: Advances in Tissue Engineering and Regenerative Medicine. Editors: H.J. Chun, R.L. Reis, A. Motta, G. Khang. 2020. Springer.
3. Co-Editor of: Bioinspired Biomaterials: Advances in Tissue Engineering and Regenerative Medicine. Editors: H.J. Chun, R.L. Reis, A. Motta, G. Khang. 2020. Springer.

Book chapters:

1. A. Motta "Dinamica delle interazioni biomateriale-ambiente biologico" in: Biomateriali: dagli impianti protesici alla medicina rigenerativa, a cura di A. Cigada, R. Contro, C. Di Bello, M.C. Tanzi, Gruppo Nazionale di Bioingegneria, vol. 24, Patron editore, Bologna, 2005, pp. 27-47 (ISBN 88-555-2836-X) ;
2. C. Migliaresi, A. Motta, A. Di Benedetto. Injectable scaffolds for bone and cartilage regeneration, Cap. 7: In: F. Bronner, M.C. Farach-Carson, A.G. Mikos; Engineering of functional skeletal tissues, Berlin: Springer, 2007. p. 95-109.
3. E. Carletti, A. Motta, C. Migliaresi. Scaffolds for tissue engineering and 3D cell culture. In: 3D Cell Culture : Methods and Protocols, Springer Protocols; 2011. 695:17-39. doi: 10.1007/978-1-60761-984-0_2.
4. A. Motta, M. Floren, C. Migliaresi. Silk fibroin in medicine. Book Chapter in: Silk: properties, Production and Uses. Nova Science Publishers, Inc., Hauppauge, NY 11788-3619, ISBN 978-1-62100-692-3, 2011, 189-222;

5. A. Motta, C. Foss, C. Migliaresi C. Tailoring silk-based matrices for tissue regeneration. In: Tailored Polymer Architectures for Pharmaceutical and Biomedical Applications. 2013, Chapter 17: 281-99, ACS Symposium Series, Vol.: 1135, editors: C. Scholz and J. Kressler,.
6. M. Stoppato, E. Carletti, C. Migliaresi, A. Motta. The functional role of ECM, in: Scaffolds for Tissue Engineering: Biological Design, Materials, and fabrication. Edts: C. Migliaresi and A. Motta. 2014 Pan Stanford Publishing Pte. Ltd. ISBN: 978-981-4463-20-1.
7. A. Motta, M. Floren, C. Migliaresi. Silks: a unique family of biopolymers. In: "Biomaterials from Nature from Advanced Devices & Therapies", edited by profs. Nuno Neves and Rui Reis, Wiley, in press, 2015.
8. A. Motta, M. Fedel, C. Migliaresi. Hydrogels in cartilage tissue engineering, chapter 8, in: Gels Handbook. Fundamentals, Properties and Applications, Volume 2: Applications of Hydrogels in Regenerative Medicine. Edts: M. Reza Abidian, U. Utkan Demirci, F. Edalat. 2016, 215-270. World Scientific Publishing Company. DOI: 10.1142/9789813140394_0008.
9. W. Bonani, W. Singhatanadgige, A. Pomanong, A. Motta. Natural origin materials for osteochondral tissue engineering. *Adv. Exp. Med. Biol.* 2018, 1058: 3-30. DOI: 10.1007/978-3-319-76711-6_1.
10. Y. Yang, J. Chen, C. Migliaresi, A. Motta. Natural Fibrous Protein for Advanced Tissue Engineering Applications: Focusing on Silk Fibroin and Keratin. *Advances in experimental medicine and biology*, 2020, 1249: 39-49. doi: 10.1007/978-981-15-3258-0_3.
11. L. Pierantoni, J. Silva-Correia, A. Motta, R.L. Reis, J. M. Oliveira. Biomaterials as ECM-like matrices for 3D in vitro tumor model. *Materials Today*, 2020, Chapter 7, 157-73, <https://doi.org/10.1016/B978-0-12-818128-7.00007-1>.
12. Yuejiao Yang, Eugenia Spessot, and Antonella Motta. Silk fibroin-based soft biomaterial/scaffolds for tissue engineering strategies. *Soft Matter for Biomedical Applications*, 2020, Edited by Helena S. Azevedo, Joao F. Mano, Joao Borges. Royal Society of Chemistry. ISSN: 2048-769X, 2021.
13. F. Agostinacchio, A. Motta. Chapter Chapter 30: Bio-Based Hydrogels and Their Applications for Intervertebral Disc Regeneration for the book entitled "FUNCTIONAL BIO-BASED MATERIALS FOR REGENERATIVE MEDICINE From Bench to Bedside" , Editors: Mohd Fauzi Mh Busra, Law Jia Xian, Yogeswaran Lokanathan and Ruszymah Bt Hj Idrus, 2021 in press.

Articles in International Journals:

1. E. Tardito, B. Biondo, V. Caputo, G. Freddi, E. Grosso, S. Mantero, A. Motta, M.L. Repetti, L. Maturri. Anastomotic disunion in long-term patent vascular synthetic grafts in Dacron. *J. Card Vasc Surg*, 1993, 34, 369-80. IF: 1,51
2. E. Tardito, V. Caputo, E. Mascheroni, A. Motta, M.L. Repetti, I. Pasargiklian. Singular case of tardive anastomotic disjunction in a Dacron vascular graft. *J Card Surg*, 1993, n. 2133. IF: 1,4
3. M.C. Tanzi, S. Mantero, G. Freddi, A. Motta, S. Sada, G. Peluso. Cytocompatibility of two segmented biomedical polyurethanes. *J Mat Sci: Mat in Med*, 1994, 5, 705-710. IF: 2,1
4. A. Severini, S. Mantero, M.C. Tanzi, A. Cigada, M. Salvetti, G. Cozzi, A. Motta. Polyurethane-coated, self-expandable biliary stent: an experimental study. *Acad Radiology*, 1995, 2, 1078-1081. IF: 1,9
5. A. Tonin, P.D. Pozzo, A. Motta, F. Ferraris, C. Sudano, A. Massola. Airborne dust in wool textile mills. Part I: Sampling methodologies, monitoring, microscopical classification and size distribution analysis of dust from early stages of wool processing. *J Text Inst*, 1995, 86, 1. IF: 1,3
6. G. Freddi, A. Motta, R. Canton, R. Innocenti, C. Tonin. Airborne dust in wool textile mills. Part II: Chemistry of Individual Inorganic Particles. *J Text Inst*, 1995, 86, N.1. IF: 1,3
7. S. Mantero, R. Pietrabissa, A. Motta, M. Ferrari, R. Berchiolli. A new pericardium vascular prosthesis: mechanical behavior, SEM analyses and clinical indications. *Int J Artif Organs*, 1996, 19 (6), 372-378. IF: 1,76
8. A. Severini, S. Mantero, M.C. Tanzi, A. Cigada, F. Addis, G. Cozzi, M. Salvetti, S. Andreola, A. Motta, E. Regalia, A. Pulvirenti, E. De Pedri, R. Doci. In vivo study of polyurethane-coated Gianturco-Rosch biliary Z-stents. *Ac Radiology*, 1995, 2, 1078-1081. IF: 1,9
9. A. Motta, G. Freddi. Natural and synthetic polymers in medicine: Biostability and Biocompatibility Aspects. *Misc Publ Natl Inst Seric Entomol Sci*, 1998, 23, 21-31.
10. R. Foschino, I. Nervegna, A. Motta, A. Galli. Bacterial activity of chlorine dioxide against *Escherichia coli* in water and on hard surfaces. *J Food Protec*, 1998, 61, 6, 668-672. IF: 1,8

11. M. Santin, A. Motta, M. Cannas. Changes in serum conditioning profiles of glutaraldehyde-crosslinked collagen sponges after their treatment with calcification inhibitors. *J Biomed Mater Res*, 1998, 40, 434-441. IF: 2,8
12. M. Santin, A. Motta, M. Cannas. Changes in the surface conditioning of calcium-salt crystals treated with physiological and alkaline urine. *Brit J Urol*, 1998, 82, 97-103. IF: 3,0
13. M. Santin, A. Motta, M. Cannas. Effect of the urine conditioning film on ureteral stent encrustation and characterization of its protein composition. *Biomaterials*, 1999, 20, 1245-1251. IF: 7,6
14. M. Santin, A. Motta, G. Freddi, M. Cannas. In vitro evaluation of the inflammatory potential of the silk fibroin. *J Biomed Mater Res*, 1999, 46 (3), 382-389. IF: 2,8
15. S. Farè, P. Petrini, A. Motta, A. Cigada, M.C. Tanzi. Synergistic effects of oxidative environments and mechanical stress on in vitro stability of polyetherurethanes and polycarbonateurethanes. *J Biomed Mater Res*, 1999, 45, 62-74. IF: 2,8
16. E. De Giglio, A. Motta, L. Quagliarella, L. Sabbatini, G. Solarino, P.G. Zambonin. A combined XPS-SEM/EDX investigation on explanted UHD polyethylene acetabular cups: possible role of silicon traces in the wear debris. *J Mater Sci-Mater M*, 2000, 11, 1-6. IF: 2,1
17. K. Kemal, A. Motta, L. Fambri, C. Migliaresi. Poly(e-Caprolactone-co-D,L-lactide)/Silk Fibroin Particles Composite: Materials Preparation and Characterization. *J Biomater Sci Polym Edn*, 2001, 12 (3), 337-351. IF: 1,7
18. G.A. Abraham, A. Gallardo, A. Motta, C. Migliaresi, J. San Roman. Microheterogeneous polymer systems prepared by suspension polymerization of methyl methacrylate in the presence of poly(epsilon-caprolactone). *Macromol Mater Eng*, 2000, 282, 44-50. IF: 2,3
19. A. Motta, C. Migliaresi, A.W. Lloyd, S.P. Denyer, M. Santin. Serum protein adsorption on silk fibroin fibres and membranes: surface opsonization and binding strength. *J Bioact Compat Pol*, 2002, 17, 23-35. IF: 2,2
20. A. Motta, L. Fambri, C. Migliaresi. Regenerated silk fibroin films: Thermal and dynamic mechanical analysis. *Macromol Chem Phys*, 2002, 203 (10/11), 1658-1665. IF: 2,3
21. M. Santin, S.P. Denyer, A.W. Lloyd, A. Motta. Domain-driven binding of fibrin(ogen) onto silk fibroin biomaterials. *J Bioact Comp Pol*, 2002, 17 (3), 195-208. IF: 2,2
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