

Academic Curriculum vitae Prof. Ille C. Gebeshuber



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Born: April 10, 1969, Bruck/Mur
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Affiliations:
 Institute of Applied Physics
 Vienna University of Technology
 1040 Wien, Austria, Europe (*permanent affiliation*)
 Institute of Microengineering and Nanoelectronics
 Universiti Kebangsaan Malaysia
 43600 UKM, Bangi, Selangor, Malaysia (2009-2015)
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Education

- 2008 Habilitation (*venia legendi*) in “Experimental Physics”, Vienna University of Technology, Austria
- 1998 PhD in the Technical Sciences (Dr. techn.) (with highest honors)
- 1998 Ph.D. in Physics (with highest honors). Thesis “Stochastic and Deterministic Influences on the Peripheral Coding of Auditory Signals”, Supervisor DDDr. Frank Rattay, Vienna University of Technology, Austria
- 1995-1998 Doctorate Study Technical Sciences
- 1995 Diploma in Physics Engineering (Dipl.-Ing.) (with highest honors)
- 1987-1995 Study of Physics Engineering, Vienna University of Technology, Austria
- 1987 Matura (School Leaving Examination) (with highest honors), Bundesgymnasium Kapfenberg, Austria

Professional Career

- From 01/2009: Full Professor, Principal Scientist “Physics, Nanotechnology and Biomimetics”, Universiti Kebangsaan Malaysia, Malaysia
- From 03/2009: Associate Professor, University of Technology Vienna, Austria
- From 10/2006: Principal Scientist and Key Researcher, Austrian Center of Competence for Tribology AC²T, Wiener Neustadt, Austria
- 10/2002-01/2009: Assistant Professor, Institut für Allgemeine Physik, Austria
- 01/2003-09/2006: Senior Researcher and Head of Strategic Research, Austrian Center of Competence for Tribology, AC²T Research GesmbH, Wiener Neustadt, Austria
- 01/2000-12/2002: PostDoc, Vienna University of Technology, Austria
- 12/1999-12/1999: Scientific Co-worker, Vienna University of Technology, Austria
- 06/1999-11/1999: PostDoc, University of California Santa Barbara, USA
- 07/1998-06/1999: PostDoc, Vienna University of Technology, Austria
- 03/1998-06/1998: Research Assistant, Vienna University of Technology, Austria
- 10/1995-09/2000: Tutor, Vienna University of Technology, Austria

Honors and Awards

- *Tribology Top 10 Articles 2007-2012* (Maney Publishing, UK)
- *Special Award for Quality* (Universiti Kebangsaan Malaysia, 2011)
- *CD of the Month* (ORF Ö1, Austrian Radio Broadcasting Agency, June 2010)
- *FWF Bilder der Wissenschaft 2008*
(Ranked amongst the best 15 science images of the year, FWF, 2009)
- *The Top Ten Women in Science & Research*
(Ranking “The 333 most important women in Austria”, Woman, 2008)
- *Expert of the Month* (Funding Agency, FEMtech, 2008)
- *Winner of the Photo Competition* (TU Vienna, 2006)
- *Winner of the Innovative Project Initiative* (TU Vienna, 2005)
- *Winner of the Research Project Initiative*
(Funding Agency, Hochschuljubiläumsstiftung der Stadt Wien, 1999)
- *Winner of the SUCCESS prize* (European Space Agency, 1999)
- *Winner of the Wiener Wirtschaft Technology Prize*
(Funding Agency, Fonds 150 Years Vienna University of Technology, 1999)
- *Winner of the first prize at the students competition*
(ETH Zürich, Switzerland, 1996)

Editorial Board Memberships

- *International Journal of Development and Sustainability*
Member of the Editorial Board (from 2012)
- *ISRN Tribology*
Member of the Editorial Board (from 2012)
- *Proceedings of the Institution of Mechanical Engineers Part C:
Journal of Mechanical Engineering Science
Special Issue*
SAGE Publications, Guest Editor (2012)
- *International Journal of Mechanical and Materials Engineering*
Member of the Editorial Board (from 2009)
- *International Journal of Microengineering and Nanoelectronics*
Member of the Editorial Board (from 2009)
- *Proceedings of the Institution of Mechanical Engineers Part C:
Journal of Mechanical Engineering Science*
Professional Engineering Publishing, London, UK
Member of the Editorial Board (from 2006)
Associate Editor (from 2009)
- *Chaos, Solitons and Fractals*
Special Issue on Stochastic Resonance in Biological Systems
Elsevier, NL, Guest Editor (September 2000)

Edited Scientific Works

- Gebeshuber I.C. and Roy M. (Guest Eds., 2012)

Advanced Materials Engineering: Selected Papers from the Indo-Austrian Symposium 2010

Special Issue of IMechE Part C: J. Mech. Eng. Sci., 226(C2), 2012, SAGE Publishing, 103 pp.

- Gruber P., Bruckner D., Hellmich C., Schmiedmayer H.-B., Stachelberger H. and Gebeshuber I.C. (Eds., 2011)
Biomimetics - Materials, Structures and Processes. Examples, Ideas and Case Studies
Springer Heidelberg Dordrecht London New York, 266 p.
- Gebeshuber I.C., Holden A.V. and Petracchi D. (Guest Eds., 2000)
Stochastic resonance in biological systems
Special issue of Chaos, Solitons & Fractals, 11(12), 09/2000, Pergamon Press, Oxford, 129 pp.
- Gebeshuber I.C., Holden A.V. and Petracchi D. (Eds., 1998)
Stochastic resonance in biological systems
Book of Abstracts, First International Conference on Stochastic Resonance in Biological systems, Arcidosso, Italy, May 5-9, 1998.

Reviewer (Peer-reviewed Journal Articles)

- Advances in Colloid and Interface Science (from 2007)
- African Journal of Agricultural Research (from 2011)
- African Journal of Biotechnology (from 2011)
- Biophysical Journal (from 1996)
- BioNanoScience (from 2011)
- Central European Journal of Biology (from 2007)
- Current Catalysis (from 2011)
- Current Engineering and Technological Research (from 2012)
- European Physical Journal - Applied Physics (from 2010)
- Europhysics Letters (from 2006)
- Foundations of Science (from 2009)
- IEEE Transactions on Nanotechnology (from 2006)
- International Journal of Computer Engineering Research (from 2011)
- International Journal of Design Engineering (from 2010)
- International Journal of Microengineering and Nanoelectronics (from 2009)
- International Journal of Mechanical and Materials Engineering (from 2010)
- International Journal of Surface Science and Engineering (from 2010)
- ISRN Tribology (from 2012)
- Journal of Microscopy (from 2008)
- Journal of Nano Research (from 2007)
- Journal of Phycology (from 2003)
- Jurnal Nanosains & Nanoteknologi (from 2010)
- Materials and Manufacturing Processes (from 2007)

- Micron (from 2005)
- Proceedings of the Institution of Mechanical Engineers Part C: Journal of Mechanical Engineering Science (from 2005)
- Proceedings of the Institution of Mechanical Engineers Part J: Journal of Engineering Tribology (from 2006)
- Proceedings of the Institution of Mechanical Engineers Part H: Journal of Engineering in Medicine (from 2009)
- Review of Scientific Instruments (from 2010)
- Scientific Research and Essays (from 2011)
- Scanning (from 2011)
- Sensors (from 2009)
- Sensors & Actuators: A. Physical (from 2012)
- Tribology Letters (from 2009)
- Tribology - Materials, Surfaces & Interfaces (from 2009)

Reviewer (Book Chapters)

- "Scaling in Solid Mechanics", Ed. F.M. Borodich, Berlin, Springer, 2008
- "The Diatoms: Applications for the Environmental and Earth Sciences" (2nd Ed., Eds. Smol J.P. and Stoermer E.F.), Cambridge University Press, 2009
- "Scanning Probe Microscopy in Nanoscience and Nanotechnology", Ed. B. Bhushan, Springer-Verlag, Heidelberg, 2010
- "Biomimetics - Materials, Structures and Processes. Examples, Ideas and Case Studies", Eds: Bruckner D., Gruber P., Hellmich C., Schmiedmayer H.-B., Stachelberger H., Gebeshuber I.C., Springer Publishing, 2011
- "The Diatom World", Eds: Kociolek P. and Seckbach J., Springer, 2010
- "The Science of Algal Fuels: Phycology, Geology, Biophotonics, Genomics and Nanotechnology", Eds. R. Gordon & J. Seckback, Springer, Dordrecht, 2012.

Reviewer (Grant Applications)

- ERC European Research Council, ERC Advanced Grants, Area "Products and Process Engineering", Brussels, Belgium, 2011
- Serbia Innovation Project (funded by Innovation Fund, Republic of Serbia and the Worldbank), Belgrade, Serbia, 2011-2014

Reviewer (Books)

- "Geschlechtersensible Hospiz- und Palliativkultur in der Altenhilfe", Eds. E. Reitingger & S. Beyer, Mabuse Verlag, 2010

Reviewer (Peer-reviewed Conference Proceeding Articles and Abstracts)

- International Conference on Engineering and Meta-Engineering: ICEME 2010 (Jointly with The 16th International Conference on Information Systems Analysis and Synthesis: ISAS 2010 and The 8th International Conference on Computing, Communications and Control Technologies: CCCT 2010), 6-9 April 2010, Orlando, Florida, USA
- The 3rd International Multi-Conference on Engineering and Technological Innovation: IMETI 2010, June 29th - July 2nd, 2010, Orlando, Florida, USA
- 4th IEEE International Conference on Computer Science and Information Technology 2011 (IEEE ICCSIT 2011), 10-12 June 2011, Chengdu, China
- 1st International Conference on Electrical, Control and Computer Engineering 2011 (InECCE 2011), 21-22 June 2011, Kuantan, Pahang, Malaysia
- The 4th International Multi-Conference on Engineering and Technological Innovation: IMETI 2011, 19-22 July 2011, Orlando, Florida, USA
- 2nd International Conference on Photonics 2011 ICP2011, October 17-19, 2011, Kota Kinabalu, Malaysia
- 1st International Conference “Sustainability through Biomimicry: Discovering a World of Solutions Inspired by nature” STB12, 26-28 November 2012, Dammam, Kingdom of Saudi Arabia

Academic Contributions

58 articles in peer review journals; 49 invited bookchapters; 163 research abstracts; 64 invited lectures, plenary addresses and keynote presentations at international conferences; scientific committee member in 31 conferences and projects; 12 honors and awards; reviewer for 34 international journals, 6 books and two grant agencies; comprehensive scientific outreach work (33 public lectures and workshops, 2 CDs on Physics, 28 radio broadcastings – Ö1, TV, 7 popular science articles, 14 panel discussions, press conferences and exhibitions) and extensive media coverage of research and professional activities.

For complete CV, please see http://www.iap.tuwien.ac.at/~gebeshuber/CV_ICG.HTML

(Status May 5, 2012)

List of Publications Ille C. Gebeshuber

All publications can be downloaded from

http://www.iap.tuwien.ac.at/~gebeshuber/CV_ICG.HTML

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Peer-Reviewed Articles and Editorial Material

1. Ismardi A., Dee C.F., Hamzah A.A., Bais B., Salleh M.M., Majlis B.Y. and **Gebeshuber I.C.**
Co-Synthesis and characterization of In₂O₃ and ZnO nanowires (Sintesis Bersama dan Pencirian bagi Nanowayar In₂O₃ dan ZnO)
Sains Malaysia 41(4), 459-463, 2012. ISSN 0126-6039.
2. **Gebeshuber I.C.** and Roy M.
Guest Editorial: Special Issue on Advanced Materials Engineering: Selected Papers from the Indo-Austrian Symposium 2010
Proc. IMechE Part C: J. Mech. Eng. Sci. 226(C2), Special Issue “Advanced Materials Engineering: Selected Papers from the Indo-Austrian Symposium 2010” (Guest Eds: Ille C. Gebeshuber and Manish Roy), 299-302, 2012.
doi:10.1177/0954406211435297, **invited article**
3. **Gebeshuber I.C.**
Green nanotribology
Proc. IMechE Part C: J. Mech. Eng. Sci. 226(C2), Special Issue “Advanced Materials Engineering: Selected Papers from the Indo-Austrian Symposium 2010” (Guest Eds: Ille C. Gebeshuber and Manish Roy), 374-386, 2012
doi:10.1177/0954406211428020, **invited article**
4. Ismardi Abrar, Dee C.F., **Gebeshuber I.C.** and Majlis B.Y.
Growth and characterization of Indium doped ZnO nanowires using vapor transport deposition method
Adv. Mat. Res. 364, 202-205, 2012. ISSN 1022-6680.
doi:10.4028/www.scientific.net/AMR.364.202
5. Gordon R., Levin S.M. and **Gebeshuber I.C.**
Triggered, nanostructured biodegradables (TNBs) for surgical implants
invited article, Special issue on Bioinspired Micro and Nanosystems, Micro and Nanosystems 3(4), 271-276, 2011. ISSN 1876-4029, doi:10.2174/1876402911103040271
6. **Gebeshuber I.C.** and Gordon R.
Bioinspiration for tribological systems on the micro- and nanoscale: dynamic, mechanical, surface and structure related functions
invited article, Special issue on Bioinspired Micro and Nanosystems, Micro and Na-

- nosystems 3(4), 284-289. ISSN 1876-4029, doi:10.2174/1876402911103040284
7. Macqueen M.O., Mueller J., Dee C.F. and **Gebeshuber I.C.**
GEMS: A MEMS-based way for the innervation of materials
Adv. Mat. Res. 254(8), 34-37, 2011. ISSN 1022-6680.
 8. Karman S.B., Macqueen M.O., Matin T.R., Diah S.M., Mueller J., Yunas J., Davaji B., Makarczuk T. and **Gebeshuber I.C.**
On the way to the bionic man: A novel approach to MEMS based on biological sensory systems
Adv. Mat. Res. 254(8), 38-41, 2011. ISSN 1022-6680.
 9. Yunas J., Johari J., Bahadorimehr A.R., **Gebeshuber I.C.** and Majlis B.Y.
Investigation of simple process technology for the fabrication of valveless micro-pumps
Adv. Mat. Res. 254(8), 211-214, 2011. ISSN 1022-6680.
 10. **Gebeshuber I.C.** and Majlis B.Y.
3D corporate tourism: A concept for innovation in nanomaterials engineering
Int. J. Mat. Eng. Innov. 2(1), 38-48, 2011, **invited article**. Online ISSN 1757-2762, Print ISSN 1757-2754.
 11. Naveira-Suarez A., Tomala A., Pasaribu R., Larsson R. and **Gebeshuber I.C.**
Evolution of ZDDP-derived reaction layer morphology with rubbing time
Scanning 32(5), 294-303, 2010, **invited article**. doi: 10.1002/sca.20207. Online ISSN 1932-8745, ISSN 0161-0457. Incl. **Coverpage**.
 12. Doerr N., **Gebeshuber I.C.**, Holzer D., Wanzenboeck H.D., Ecker A., Pauschitz A. and Franek F.
Evaluation of ionic liquids as lubricants
J. Microeng. Nanoel. 1(1), 29-34, 2010. ISSN 2229-3183, **invited article**
 13. Yunas J., Johari J., **Gebeshuber I.C.** and Majlis B.Y.
Design and fabrication of MEMS micropumps using double sided etch technique
IMAPS Journal of Microelectronics and Electronic Packaging 7(1), 44-47, 2010. ISSN 1551-4897
 14. **Gebeshuber I.C.** and Majlis B.Y.
New ways of scientific publishing and accessing human knowledge inspired by trans-disciplinary approaches
Tribology - Surfaces, Materials and Interfaces 4(3), 143-151, 2010. Print ISSN 1751-5831, Online ISSN 1751-584X, doi:10.1179/175158310X12626998129716
 15. Zika T., Buschbeck F., Preisinger G., **Gebeshuber I.C.** and Groeschl M.
Surface damage of rolling bearings caused by discrete current flow
Z. Tribologie und Schmierungstechnik T&S 57(2), 11-14, 2010. ISBN-13 978-3-8169-9999-7, ISSN 0724-3472, **invited article**
 16. Tiffany M.A., Gordon R. and **Gebeshuber I.C.**
Hyalodiscopsis plana, a sublittoral centric marine diatom, and its potential for nanotechnology as a natural zipper-like nanoclash
Polish Botanical Journal 55(1), 27-41, 2010. Incl. **Coverpage**.
 17. Tomala A., **Gebeshuber I.C.**, Pauschitz A. and Roy M.
A comparative AFM study of carbon alloyed Mo-Se-C and W-S-C films for tribological

applications

Int. J. Mat. Res. (formerly: Zeitschrift fuer Metallkunde) 2010/07, 845-851, 2010. ISSN 1862-5282, doi:10.3139/146.110358

18. **Gebeshuber I.C.**, Majlis B.Y. and Stachelberger H.
Tribology in Biology: Biomimetic studies across dimensions and across fields
Int. J. Mech. Mat. Eng. (3), 321-327, 2009. ISSN 1823-0334
19. Tomala A., Naveira-Suarez A., **Gebeshuber I.C.** and Pasaribu R.
Effect of base oil polarity on micro and nano friction behaviour of base oil + ZDDP solutions
Tribology - Surfaces, Materials and Interfaces 3(4), 182-188, 2009
doi:10.1179/175158310X481709
20. **Gebeshuber I.C.**, Gruber P. and Drack M.
A gaze into the crystal ball - biomimetics in the year 2059
Proc. IMechE Part C: J. Mech. Eng. Sci. 223(C12), 50st Anniversary Issue, 2899-2918, 2009
doi:10.1243/09544062JMES1563, **invited article**
21. Tomala A., Doerr N. and **Gebeshuber I.C.**
Ultraduene Schichten aus Ethanolamin - energieeffiziente wartungsarme Schmierstoffe
Z. Tribologie und Schmierungstechnik T&S 05/2009, 29-32. ISBN-13 978-3-8169-9999-7, ISSN 0724-3472, 2009, **invited article**
22. Tomala A., Doerr N. and **Gebeshuber I.C.**
Ultratenke vrstvy z etanolaminu - energeticky efektivne mazacie latky bez potreby udrzby
Tribotechnika 4/2009, 40-43, 2009. ISSN 1338-0S24, **invited article**
23. Srajer J., Majlis B.Y. and **Gebeshuber I.C.**
Microfluidic simulation of a colonial diatom chain reveals oscillatory movement
Acta Bot. Croat. 68 (2), 431-441, 2009.
24. Tomala A., Werner W.S.M., **Gebeshuber I.C.**, Doerr N. and Stoeri H.
Tribochemistry of monomolecular lubricant films of ethanolamine oligomers
Tribology International 42(10), 1513-1518, 2009
doi:10.1016/j.triboint.2009.06.004
25. Zika T., **Gebeshuber I.C.**, Buschbeck F., Preisinger G. and Gröschl M.
Surface analysis on rolling bearings after exposure to defined electric stress
Proc. IMechE Part J: J. Eng. Tribol. 223 (J5), 787-797, 2009.
doi: 10.1243/13506501JET538
26. **Gebeshuber I.C.**, Holzer D., Goschke R., Aumayr F. and Störi H.
Development of an atomic force microscope closed fluid cell for tribological investigations of large samples in chemically aggressive environments
Proc. IMechE Part J: J. Eng. Tribol. 223 (J5), 759-765, 2009.
doi: 10.1243/13506501JET539
27. **Gebeshuber I.C.**, Stachelberger H., Ganji B.A., Fu D.C., Yunas J. and Majlis B.Y.

Exploring the innovational potential of biomimetics for novel 3D MEMS
Adv. Mat. Res. 74, 265-268, 2009.
doi:10.4028/www.scientific.net/AMR.74.265

28. Gebeshuber I.C.

Engineering at the interface revisited
Proc. IMechE Part C: J. Mech. Eng. Sci. 223(C1), 50st Anniv. Issue, 65-101, 2009
doi: 10.1243/09544062JMES1138, **invited article**

29. Gebeshuber I.C., Drack M. and Scherge M.

Tribology in biology
Tribology - Materials, Surfaces & Interfaces 2(4), 200-212, 2008
doi: 10.1179/175158308X383206

30. Gebeshuber I.C. and Drack M.

An attempt to reveal synergies between biology and engineering mechanics
Proc. IMechE Part C: J. Mech. Eng. Sci. 222, 1281-1287, 2008
doi: 10.1243/09544062JMES890, **invited article**

31. Bogus A., Gebeshuber I.C., Pauschitz A., Roy M. and Haubner R.

Micro- and nanomechanical properties of diamond film with various surface morphologies
Diamond and Related Materials 17(12), 1998-2004, 2008
doi: 10.1016/j.diamond.2008.06.010

32. El-Said A.S., Heller R., Meissl W., Ritter R., Facsko S., Lemell C., Solleder B., Gebeshuber I.C., Betz G., Toulemonde M., Möller W., Burgdörfer J. and Aumayr F.

Creation of nano-hillocks on CaF₂ surfaces by slow highly charged ions
Phys. Rev. Lett. 100, 237601 (4 pages), 2008
doi: 10.1103/PhysRevLett.100.237601

33. Hekele O., Goesselsberger C.G. and Gebeshuber I.C.

Nanodiagnosics performed on human red blood cells with the atomic force microscope
Mat. Sci. Technol. 24(9), 1162-1165(4), 2008, doi: 10.1179/174328408X341834

34. Lemell C., El-Said A.S., Meissl W., Gebeshuber I.C., Trautmann C., Toulemonde M, Burgdörfer J. and Aumayr F.

On the nano-hillock formation induced by slow highly charged ions on insulator surfaces
Solid-State Electronics 51, 1398-1404, 2007, doi: 10.1016/j.sse.2007.06.016

35. Gebeshuber I.C.

Biotribology inspires new technologies
Nano Today 2(5), 30-37, 2007
doi:10.1016/S1748-0132(07)70141-X, **invited article**

36. El-Said A.S., Meissl W., Simon M.C., Crespo López-Urrutia J.R., Gebeshuber I.C., Laimer J., Winter HP., Ullrich J. and Aumayr F.

Creation of surface nanostructures by irradiation with slow highly charged ions
Rad. Eff. Def. Solids 162, 467-472, 2007
doi: 10.1080/ 10420150701470803

37. El-Said A.S., Meissl W., Simon M.C., Crespo López-Urrutia J.R., Lemell C., Burgdörfer

- J., **Gebeshuber I.C.**, Winter HP., Ullrich J., Trautmann C., Toulemonde M., Aumayr F.
Potential energy threshold for nanohillock formation by impact of slow highly charged ions on a CaF₂(111) surface
Nucl. Instr. Meth. Phys. Res. B 258, 167-171, 2007
doi:10.1016/j.nimb.2006.12.142
38. Gruenberger C., Ritter R., Aumayr F., Stachelberger H. and **Gebeshuber I.C.**
Algal biophysics: Euglena gracilis investigated by atomic force microscopy
Mat. Sci. Forum 555, 411-416, 2007
39. El-Said A.S., Meissl W., Simon M.C., Crespo López-Urrutia J.R., **Gebeshuber I.C.**,
Lang M., Winter HP., Ullrich J. and Aumayr F.
Surface nanostructures induced by slow highly charged ions on CaF₂ single crystals
Nucl. Instr. Meth. Phys. Res. B 256, 346-349, 2007
doi:10.1016/j.nimb.2006.12.140
40. Fürsatz M., Meissl W., Pleschko S., **Gebeshuber I.C.**, Stolterfoht N., Winter HP. and
Aumayr F.
*Charging and discharging of nano-capillaries during ion-guiding of multiply charged
projectiles*
J. Phys. Conf. Ser. 58, 319-322, 2007
41. Crawford R.M. and **Gebeshuber I.C.**
Harmony of beauty and expediency
Science First Hand 5(10), 30-36, 2006. Incl. **Coverpage.**
42. Crawford R.M. and **Gebeshuber I.C.**
Harmony of beauty and expediency (in Russian)
Science First Hand (Russian Version) 4(10), 48-54, 2006. Incl. **Russian Coverpage.**
43. Crawford R.M., **Gebeshuber I.C.**, Thamatrakoln K. and Hildebrand M.
Mini Nano-engineers
Science First Hand 5(10), 2006.
44. Crawford R.M., **Gebeshuber I.C.**, Thamatrakoln K. and Hildebrand M.
Mini Nano-engineers (in Russian)
Science First Hand (Russian Version) 4(10), 2006.
45. **Gebeshuber I.C.** and Crawford R.M.
*Micromechanics in biogenic hydrated silica: hinges and interlocking devices in dia-
toms*
Proc. IMechE Part J: J. Eng. Tribol. 220(J8), 787-796, 2006
46. **Gebeshuber I.C.**
*Bio-tribology and the operating environment (Discussion on D. Dowson and A.
Neville)*
Proc. IMechE Part J: J. Eng. Tribol. 220(J3), 333, 2006
47. **Gebeshuber I.C.**, Stachelberger H. and Drack M.
Diatom tribology
Life Cycle Tribology 48, 365-370, 2005
48. Kolm R., **Gebeshuber I.C.**, Kenesey E., Ecker A., Pauschitz A., Werner W.S.M., and

- Störi H.
Tribochemistry of mono molecular additive films on metal surfaces, investigated by XPS and HFRR
Life Cycle Tribology 48, 269-282, 2005
49. **Gebeshuber I.C.**, Stachelberger H. and Drack M.
Diatom bionanotribology - Biological surfaces in relative motion: their design, friction, adhesion, lubrication and wear
J. Nanosci. Nanotechnol. 5(1), 79-87, 2005. Incl. Coverpage.
50. **Gebeshuber I.C.**, Cernusca S., Aumayr F. and Winter HP.
Nanosopic surface modification by slow ion bombardment
Int. J. Mass Spectrom. 229, 27-34, 2003
51. **Gebeshuber I.C.**, Cernusca S., Aumayr F. and Winter HP.
Slow multicharged-ion induced nanodefects on monocrystalline insulator surfaces studied by UHV-AFM
Nucl. Instr. Meth. Phys. Res. B 205, 751-757, 2003
52. **Gebeshuber I.C.**, Kindt J.H., Thompson J.B., Del Amo Y., Stachelberger H., Brzezinski M., Stucky, G.D. Morse D.E. and Hansma P.K.
Atomic force microscopy study of living diatoms in ambient conditions
J. Microsc. 212, 292-299, 2003. Incl. **Coverpage**.
53. **Gebeshuber I.C.**, Thompson J.B., Del Amo Y., Stachelberger H. and Kindt J.H.
In vivo nanoscale atomic force microscopy investigation of diatom adhesion properties
Mat. Sci. Technol. 18, 763-766, 2002
54. Petracchi D., **Gebeshuber I.C.**, DeFelice L.J. and Holden A.V.
Stochastic resonance in biological systems
Chaos, Solitons & Fractals 11, 1819-1822, 2000
55. Viani M.B., Pietrasanta L.I., Thompson J.B., Chand A., **Gebeshuber I.C.**, Kindt J.H., Richter M., Hansma H.G. and Hansma P.K.
Probing protein-protein interactions in real time
Nature Structural Biology 7, 644-647, 2000
56. **Gebeshuber I.C.**
The influence of stochastic behavior on the human threshold of hearing
Chaos, Solitons & Fractals 11, 1855-1868, 2000
57. Svrcek-Seiler W.A., **Gebeshuber I.C.**, Rattay F., Biro T. and Markum H.
Micromechanical models for the Brownian motion of hair cell stereocilia
J. Theor. Biol. 193, 623-630, 1998
58. Rattay F., **Gebeshuber I.C.**, Gitter A.H.
The auditory hair cell: a simple electric circuit model
J. Acoust. Soc. Am. 103, 1558-1565, 1998

Monographs and Edited Scientific Works

Gebeshuber I.C. and Roy M. (Guest Eds.)

Advanced Materials Engineering: Selected Papers from the Indo-Austrian Symposium 2010

Special Issue of Proc. IMechE Part C: J. Mech. Eng. Sci., 226(C2), 2012, SAGE Publishing, 103 pp.

Gruber P., Bruckner D., Hellmich C., Schmiedmayer H.-B., Stachelberger H. and **Gebeshuber I.C.** (Eds.)

Biomimetics - Materials, Structures and Processes. Examples, Ideas and Case Studies

Series: Biological and Medical Physics, Biomedical Engineering, Springer Heidelberg Dordrecht London New York, 2011. Series Editor Claus Ascheron, 123 illus. (53 in color), Hardcover, ISBN 978-3-642-11933-0, eISBN 978-3-642-11934-7, 266 p.

Gebeshuber I.C.

Biomimetics and Nanotechnology

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