

ALAN ZEHNDER – COMPLETE PUBLICATIONS LIST

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BOOKS:

Alan T. Zehnder, **Fracture Mechanics**, Springer, (2012), DOI: 10.1007/978-94-007-2595-9

Beese, Allison M., Zehnder, Alan T., Xia, Shuman (Eds.), **Fracture, Fatigue, Failure and Damage Evolution, Volume 8, Proceedings of the 2015 Annual Conference on Experimental and Applied Mechanics**, Springer (2016).

Zehnder, Alan T., Carroll, J., Hazeli, K., Berke, R.B., Pataky, G., Cavalli, M., Beese, A., Xia, S., (Eds), **Fracture, Fatigue, Failure and Damage Evolution, Volume 8, Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics**, Springer (2017).

Zhu, Y., and Zehnder, A.T., **Experimental and Applied Mechanics, Volume 4, Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics**, Springer (2017).

BOOK CHAPTERS:

1. Alan T. Zehnder, "Griffith fracture theory," invited article for **Encyclopedia of Tribology**, Q.J. Wang and Y.W. Chung, (eds.), Springer (2013), ISBN 978-0-387-92898-2.
2. Alan T. Zehnder, "Modes of fracture," invited article for **Encyclopedia of Tribology**, Q.J. Wang and Y.W. Chung, (eds.), Springer (2013). ISBN 978-0-387-92898-2.
3. Alan T. Zehnder, "Stress intensity factors," invited article for **Encyclopedia of Tribology**, Q.J. Wang and Y.W. Chung, (eds.), Springer (2013). ISBN 978-0-387-92898-2.
4. Alan T. Zehnder, "Static fracture response of materials," invited chapter for **Encyclopedia of Aerospace Engineering**, 1851-1858, Richard Blockley and Wei Shyy (eds.), John Wiley & Sons (2010).

JOURNAL PUBLICATIONS:

5. Richard Rand, Alan Zehnder, B Shayak, and Aditya Bhaskar, "Simplified model and analysis of a pair of coupled thermo-optical MEMS oscillators," submitted to **Nonlinear Dynamics**, (2018).
6. Mincong Liu, Jingyi Guo, Chung-Yuen Hui, and Alan Zehnder, "Application of Digital Image Correlation (DIC) to the Measurement of Large Deformations in a PVA, Dual-Crosslink Hydrogel," submitted to **Experimental Mechanics**, (2018).
7. Mincong Liu, Jingyi Guo, Chung-Yuen Hui, Costantino Creton, Tetsuhara Narita, and Alan Zehnder, "Time-Temperature Equivalence in a PVA Dual Cross-Link Self-Healing Hydrogel," **Journal of Rheology** **62**, 991 (2018); <https://doi.org/10.1122/1.5029466> .
8. Alan Zehnder, Richard Rand, Slava Krylov, "Phase Locking of Electrostatically Coupled Thermo-optically Driven MEMS Limit Cycle Oscillators," **International Journal of Nonlinear Mechanics**, **102**, pp. 92-100 (2018), <https://doi.org/10.1016/j.ijnonlinmec.2018.03.009>
9. Nir Dick, Scott Grutzik, Christopher Wallin, B. Robert Ilic, Slava Krylov, Alan Zehnder "Actuation of higher harmonics in large arrays of micromechanical cantilevers for expanded resonant peak separation," **ASME Journal of Vibration and Acoustics**, **140**, pp. 051013-1 – 011013-10 (2018), doi:10.1115/1.4039568.

10. Jingyi Guo, Mincong Liu, Alan T. Zehnder, Jingwen Zhao, Tetsuhara Narita, Costantino Creton, and Chung-Yuen Hui, "Fracture mechanics of a self-healing hydrogel with covalent and physical cross-links: A numerical study," **Journal of the Mechanics and Physics of Solids**, Vol 120, pp. 79-95, (2018), <https://doi.org/10.1016/j.jmps.2018.03.009>.
11. Yi Xu and Alan Zehnder, "Pressure, Hydrolytic Degradation and Plasticization Drive High Temperature Blistering Failure in Wet Polyimides," **Extreme Mechanics Letters**, **16C**, pp. 49-55 doi: 10.1016/j.eml.2017.09.002 (2017).
12. Abhendra Singh, Barry Davidson, Benjamin Hasseldine and Alan Zehnder, "An Analytical Model for the Response of Carbon/Epoxy-Aluminum Honeycomb Core Sandwich Structures Under Quasi-Static Indentation Loading," published on-line, **Journal of Sandwich Structures**, (2017). <https://doi.org/10.1177/1099636217738709>
13. Yi Xu and Alan Zehnder, "Moisture Degradation Effects on the Mechanical Properties of HFPE-II-52 Polyimide: Experiments and Modeling," **Experimental Mechanics**, **57**, pp. 857-869, (2017). DOI: 10.1007/s11340-017-0281-3
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15. Scott Grutzik, Erik Milosevic, Brad Boyce and Alan Zehnder, "Oxide driven strength evolution of silicon surfaces," **Journal of Applied Physics**, **118**, 195304 (2015); doi: 10.1063/1.4936118
16. Alan T. Zehnder and Natasha K. Zella, "Spiral to flat fracture transition for notched rods under torsional loading," **International Journal of Fracture**, **195**, pp. 87-92, (2015) doi: 10.1007/s10704-015-0049-7
17. Benjamin Hasseldine, Alan Zehnder, Bryan Keating, Abhendra Singh and Barry Davidson, "Compressive strength of aluminum honeycomb core sandwich panels with thick carbon/epoxy facesheets subjected to barely visible indentation damage," **Journal of Composite Materials**, **50**(3), (2016) 387-402; doi: 10.1177/0021998315575748
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CONFERENCE PROCEEDINGS:

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