

SCIENCE PUBLICATIONS

Professor Ahmed H. Zewail

Books

1. *Advances in Laser Spectroscopy I*, ed. A. H. Zewail, SPIE, Bellingham, 1977
2. *Advances in Laser Chemistry*, ed. A. H. Zewail, Springer-Verlag, Berlin-Heidelberg, 1978
3. *Photochemistry and Photobiology, Vols. 1 and 2*, ed. A. H. Zewail, Harwood Academic, London, 1983
4. *Ultrafast Phenomena VII*, eds. C. B. Harris, E. P. Ippen, G. A. Mourou and A. H. Zewail, Springer-Verlag, Berlin-Heidelberg, 1990
5. *The Chemical Bond: Structure and Dynamics*, ed. A. H. Zewail, Academic Press, Boston, 1992
6. *Ultrafast Phenomena VIII*, eds. J.-L. Martin, A. Migus, G. A. Mourou and A. H. Zewail, Springer-Verlag, Berlin-Heidelberg, 1993
7. *Ultrafast Phenomena IX*, eds. P. F. Barbara, W. H. Knox, G. A. Mourou and A. H. Zewail, Springer-Verlag, Berlin-Heidelberg, 1994
8. *Femtochemistry: Ultrafast Dynamics of the Chemical Bond, Vols. 1 and 2*, A. H. Zewail, World Scientific, Singapore, 1994
9. *Physical Biology: From Atoms to Medicine*, ed. A. H. Zewail, Imperial College Press, London, 2008
10. *4D Electron Microscopy: Imaging in Space and Time*, A. H. Zewail and J. M. Thomas, Imperial College Press, London, 2010
11. *4D Visualization of Matter: Recent Collected Works*, A. H. Zewail, Imperial College Press, London, 2014

Patents

1. Luminescent Solar Energy Concentrator Devices.
A. H. Zewail and J. S. Batchelder, California Institute of Technology
U.S. Pat. 4,227,939, October 14, 1980
2. Method and System for Ultrafast Photoelectron Microscope.
A. H. Zewail and V. A. Lobastov, California Institute of Technology
U.S. Pat. 7,154,091, December 26, 2006
3. 4D Imaging in an Ultrafast Electron Microscope.
A. H. Zewail, California Institute of Technology
U.S. Pat. 8,203,120, June 19, 2012
4. Characterization of Nanoscale Structures Using an Ultrafast Electron Microscope.
A. H. Zewail, California Institute of Technology
U.S. Pat. 8,247,769, August 21, 2012;
Continued, *U.S. Pat.* 8,440,970, May 14, 2013;
Continued, *U.S. Pat.* 8,686,359, April 1, 2014;
Continued, *U.S. Pat.* 9,053,903, June 9, 2015
5. Photon Induced Near Field Electron Microscope and Biological Imaging System.
A. H. Zewail, D. J. Flannigan, and B. Barwick, California Institute of Technology
U.S. Pat. 8,429,761, April 23, 2013;
Continued, *U.S. Pat.* 8,569,695, October 29, 2013;
Continued, *U.S. Pat.* 8,963,085, February 24, 2015
6. Control Imaging Methods in Advanced Ultrafast Electron Microscopy.
A. H. Zewail and J. S. Baskin, California Institute of Technology
U.S. Pat. 8,766,181, July 1, 2014
7. Method and System for 4D Tomography and Ultrafast Scanning Electron Microscopy.
A. H. Zewail, O.-H. Kwon, O. F. Mohammed Abdelsaboer, and D. S. Yang, California Institute of Technology
U.S. Pat. 8,841,613, September 23, 2014

Articles

1. Spectrophotometric Studies of Some Dihydroxyanthraquinones in Aqueous Solutions.
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Z. Phys. Chem. **244**, 155 (1970)
2. Spectral Studies of Some Hydroxy-Derivatives of Anthraquinones.
M. S. El-Ezaby, T. M. Salem, A. H. Zewail, and R. M. Issa
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4. Optical Spectroscopic Determination of the Zero-Field Splitting in Vibronic Levels of the Triplet State of Nitrite.
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J. Chem. Phys. **54**, 2979 (1971)
5. Characterization of Triplet States of Axially Symmetric Benzenes Using the Zeeman Effect.
R. M. Hochstrasser, J. E. Wessel, J. D. Whiteman, and A. H. Zewail
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6. Stark and Zeeman Effects on the Singlet $n\pi^*$ State of *s*-Triazine.
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7. Zeeman Effect Studies of the Triplet States of Benzene.
R. M. Hochstrasser, J. E. Wessel, and A. H. Zewail
J. Chem. Phys. **55**, 3596 (1971)
8. Studies of the 3455-Å Triplet State of *s*-Triazine.
R. M. Hochstrasser and A. H. Zewail
J. Chem. Phys. **55**, 5291 (1971); *ibid.* **57**, 1018 (1972)
9. Infrared Spectrophotometric Study of Some Hydroxyanthraquinones and Their Sodium Salts.
R. M. Issa, Y. Z. Ahmed, and A. H. Zewail
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R. M. Hochstrasser, T. S. Lin, and A. H. Zewail
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 13. Optical and Magnetic Resonance Spectra of Linear Chain Excitons.
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 14. Experimental Studies of Triplet Exciton Bands of Molecular Crystals.
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 15. Coherence in Electronically Excited Dimers: The Observation
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Chem. Phys. Lett. **28**, 8 (1974)
 16. Triplet Exciton Band Structure of Crystalline Phenazine.
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A. H. Zewail and C. B. Harris
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