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TUAN VO-DINH, R. EUGENE AND SUSIE E. GOODSON PROFESSOR AND DIRECTOR OF FITZPATRICK INSTITUTE FOR PHOTONICS

Dr. Tuan Vo-Dinh is R. Eugene and Susie E. Goodson Distinguished Professor of Biomedical Engineering, Professor of Chemistry, and Director of The Fitzpatrick Institute for Photonics.

Dr. Vo-Dinh's research activities and interests involve biophotonics, nanophotonics, plasmonics, laser-excited luminescence spectroscopy, room temperature phosphorimetry, synchronous luminescence spectroscopy, surface-enhanced Raman spectroscopy, field environmental instrumentation, fiberoptics sensors, nanosensors, biosensors and biochips for the protection of the environment and the improvement of human health.

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Fitzpatrick Institute for Photonics

Teaching (Spring 2010):

- BME 265.05, *ADVANCED BIOPHOTONICS* Synopsis
- BME 335.01, *ADVANCES IN PHOTONICS*
  SEE INSTRU, TuTh 02:50 PM-04:05 PM

Education:

PhD, Biophysical Chemistry, ETH (Swiss Federal Institute of Technology), Zurich, Switzerland, 1975
BS, Physics, EPFL (Swiss Federal Institute of Technology), Lausanne, Switzerland, 1970

Specialties:

Photonics
Biophotonics
Nanoscience
Nanomaterial manufacturing and characterization
Sensing and Sensor Systems
Plasmonics

Research Interests:

Vo-Dinh's research activities and interests involve biophotonics, laser-excited luminescence spectroscopy, room temperature phosphorimetry, synchronous luminescence spectroscopy, surface-enhanced Raman spectroscopy, field environmental instrumentation, fiberoptics sensors, nanosensors, biosensors and biochips for the protection of the environment and the improvement of human health. See details in Vo-Dinh Research Group Webpage: http://www.vodinh.pratt.duke.edu

Curriculum Vitae

Awards, Honors, and Distinctions

- R. Eugene and Susie E. Goodson Distinguished Professor of Biomedical Engineering, Duke University, 2007
- Director's Award for Outstanding Accomplishments in Science and Technology, UT-Battelle, 2003
- Distinguished Inventors Award, Battelle Memorial Institute, 2003
- Distinguished Scientist of the Year Award, Oak Ridge National Laboratory, 2003
- RD-100 Award for Most Technologically Significant Advance in R&D (Multifunctional Biochip), 1999
- Lockheed Martin Commercialization Award, Lockheed Martin, 1998
- AMSE Award, American Museum of Science and Technology (BiOptics), April, 1997
- BER-50 Award for Exceptional Service for a Health Citizenry, US Department of Energy, 1997
- Inventor of the Year Award, Tennessee Inventors Association, 1996
- RD-100 Award for Most Technologically Significant Advance in R&D (SERS Gene Probe), 1996
- Award for Excellence in Technology Transfer, Federal Laboratory Consortium (SERODS), 1995
- RD-100 Award for Most Technologically Significant Product of the Year (PCB Spot Test), 1994
- Inventors International Hall of Fame Award, Inventors Clubs of America, 1992
- RD-100 Award for Most Technologically Significant Product of the Year (SERODS Technology), 1992
- Thomas Jefferson Award, Martin Marietta Corporation, 1992
- Languedoc-Rousillon Medal, University of Perpignan (France), 1989
- Scientist of the Year, Oak Ridge National Laboratory, 1989
- Gold Medal Spectroscopy Award, Society for Applied Spectroscopy, 1988
- RD-100 Award for Most Significant Technological Advance in R&D (Fluoroimmunosensor), 1987
- Award for Excellence in Technology Transfer, Federal Laboratory Consortium, 1986
- RD 100 Award for Most Significant Technological Advance in Research & Dev (PNA Dosimeter), 1981

Selected Patents

- *Dosimeter for Monitoring Vapors and Aerosols, 4,680,165 (1987) of Organic Compounds*.
- *"Practical Substrate and Apparatus for Static and Continuous Monitoring by Surface-Enhanced Raman Spectroscopy," U.S. Patent No. (1987).*, 4674878.
- *"Surface-Enhanced Raman Optical Data Storage," U.S. Patent No. 4,999,810 (1991).*.

- *"Fiber Optic-Based Regenerable Biosensor," U.S. Patent No. 5,176,881 (1993).*.
- *"Enhanced Photo Activated Luminescence for Screening Polychlorobiphenyls (PCBs) and Other Related Compounds," U.S. Patent 5,272,089 (1993).*.

Selected Editorships

1. *Editor-in-Chief, NanoBiotechnology*, 2005 - present
2. *Associate Editor, Journal of Nanophotonics*, 2006 - present
3. *Associate Editor, Plasmonics (2006-present)*, 2006
4. *Associate Editor, Ecotoxicology and Environmental Safety (2003-present)*, 2003
5. *Topical Editor, Polycyclic Aromatic Compounds (1988 - present)*, 1988 - present

Representative Publications (More Publications)

1. T. Vo-Dinh, Editor, *Nanotechnology in Biology and Medicine* (2007), Taylor and Francis Publishers .
2. T. Vo-Dinh, Editor, *Protein Nanotechnology, Humana Press, New York* (2005) .
3. T. Vo-Dinh, Editor-in-Chief, *Biomedical Photonics Handbook, CRC Press, Boca Raton, Florida* (2003) .
4. G. Gauglitz and T. Vo-Dinh, Editors-in-Chief, *Handbook of Spectroscopy, Volumes I & II, Wiley-VCH, New York* (2003) .
5. T. Vo-Dinh and D. Eastwood, Editors, *Laser-Based Approaches in Luminescence Analysis, American Society for Testing and Materials (ASTM), STP 1066, Philadelphia, Pennsylvania* (1990) .
6. T. Vo-Dinh, Editor, *Chemical Analysis of Polycyclic Compounds, Wiley, New York, New York* (1989) .
7. T. Vo-Dinh, *Room Temperature Phosphorimetry for Chemical Analysis, J. Wiley, New York, New York* (1984) .

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