

# **WILLIAM C. STWALLEY, PhD**

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## **CONTEXT, EARLY BACKGROUND AND EDUCATION**

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Our family wanted to respond on Bill's behalf to share his illustrious career and wonderful life. Bill passed peacefully on his birthday, October 7th, 2025. Bill and I (Mauricette) married in 1963 and thus I was also part of his life during his Caltech years. Life with Bill has been an amazing adventure which we have shared for 62 years. Bill's career led us around the world with invitations to lecture and collaborate on research in 58 countries in Europe, Middle East, Sub-Continent, and Asia.

Bill was born and raised in Southern California. After graduating as Valedictorian from Fullerton High School, he earned his BS in Chemistry at Caltech (1964) and then his PhD in Physical Chemistry from Harvard (1969).

## **ACADEMIC ROLES**

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- Professor of Chemistry and Physics (joint appointment) at University of Iowa (1968–1993)
- Creator and Director of Laser Facilities and Head of Laser Science Centers (1978-1993)
- George Glockler Professor of Physical Sciences at University of Iowa (1988-1993)
- Associate Program Director (Quantum Chemistry) National Science Foundation (1975-76)
- Professor and Department Head of Physics at University of Connecticut (1993–2016)
- Board of Trustees Distinguished Professor of Physics, Research Professor of Physics, Affiliate Professor of Chemistry, and Director of the University of Connecticut Laser Facility (1993-2016)
- Board of Trustees Distinguished Professor of Physics Emeritus (2016-present)
- 1968-2016 – 28 PhD students, 16 postdocs, mentored students from 11 countries and postdocs from 12 countries

## **MAJOR RESEARCH INTERESTS**

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|-----------------------------------|---------------------------------------------|
| - Ultracold atoms and molecules   | - Radiative transition probabilities        |
| - Laser spectroscopy              | - Long range molecules and potential curves |
| - Photochemistry and photophysics | - Quantum degenerate gases                  |
| - Laser ionization                |                                             |

## HONORS AND AWARDS

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- Leeds and Northrup Foundation Fellow, Harvard University, 1964-65
- National Science Foundation Fellow, Harvard University, 1965-68
- Alfred P. Sloan Fellow, 1972-74
- Fellow, Japan Society for Promotion of Science, 1982
- Fellow, American Physical Society, 1982-Present
- Fellow, Optical Society of America, 1988-Present
- Fellow, Connecticut Academy of Science and Engineering, 1994-Present
- Fellow, Connecticut Academy of Arts and Sciences, 1995-Present
- William F. Meggers Award of the Optical Society of America, 1998
- Board of Trustees Distinguished Professor, University of Connecticut, 2002-2016
- Fellow, American Association for Advancement of Science, 2005-Present
- Connecticut Medal of Science, 2005
- Career Award NSF
- Career Award DOE

## PROFESSIONAL CONTRIBUTIONS

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### SOCIETY LEADERSHIP

Held numerous roles in American Physical Society, Optical Society of America, American Chemical Society, and other scientific organizations. Chair and committee member for awards, fellowships, and conferences.

### EDITORIAL WORK

Served on numerous editorial boards for journals like Journal of Molecular Spectroscopy, Chemical Physics Letters, and Physical Review A.

### GOVERNMENT AND NATIONAL LABS

Consultant and advisor to NSF, DOE, Air Force, NIST, NATO, DOD, Lawrence Livermore Laboratory and National Academy of Sciences. Chaired panels on high-energy materials, atomic spectroscopy, and research infrastructure.

### PROFESSIONAL MEETINGS

Led and organized over thirty national and international conferences on laser science, spectroscopy, and quantum chemistry.

## INTERNATIONAL ENGAGEMENT

Visiting lecturer and professor in Japan, China, India, Taiwan, Canada, and Europe. Member of international review panels and scientific committees.

## UNIVERSITY SERVICE

Extensive involvement in university governance at University of Iowa and University of Connecticut. Chaired committees on research strategy, diversity, accreditation, and faculty appointments.

## RESEARCH AND PUBLICATIONS

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- Authored over 338 scientific papers and edited eight books spanning atomic collisions, molecular spectroscopy, laser-induced chemistry, and ultracold physics.
- Co-Developed six patents.
- Pioneered techniques in optical-optical double resonance spectroscopy and photodissociation dynamics.

## ADDITIONAL NOTES

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Dr. Stwalley's CV reflects a lifetime of scientific excellence, leadership in laser and molecular physics, and deep commitment to advancing research and education globally.

The highlights of our life together are our two sons, Kenneth and Steven, and our four grandchildren. Bill and I have known each other since we were teenagers. I feel so blessed to

be able to share my life with such a wonderful gentleman. Some of the words that come to mind describing my Bill are kind, considerate, generous, honest, creative, and brilliant. He is my soul mate. He has been a wonderful husband, father, grandfather, brother and friend. He has been supportive of family and colleagues. He is a romantic who after being married for over 60 years still brought me roses, wrote me love poems and helped with the dishes.

Bill shared a poem by Robert Sexton with me that also expresses how I feel:

*"This I will remember,  
when the rest of life is through:  
the finest thing I've ever done  
is simply loving you."*

Phil Gould gave a wonderful talk at Bill's retirement celebration titled, "Man of Many Molecules." At Phil's lecture, I learned that I shared a "long-range attraction, not a short-range repulsion," and that we formed a "bound state" which I added to my after-dinner talk. Phil responded that "indeed we formed a beautiful molecule."

The Scientific Community has been our Physics Family.

When Bill became ill, we received wonderful support from our global scientific community. Many shared delightful memories and described their being "in awe of his Gigabyte memory."

We would like to thank all for always being part of our lives.

Best wishes,

Mauricette Stwalley

## REFERENCES

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William C. Stwalley CV:

[https://www.stwalley.com/bill/William\\_Stwalley\\_CV.pdf](https://www.stwalley.com/bill/William_Stwalley_CV.pdf)

Original source:

<https://physics.uconn.edu/wp-content/uploads/sites/2234/2018/06/Stwalley-CV-2018.pdf>

William C. Stwalley Obituary:

[https://www.stwalley.com/bill/William\\_Stwalley\\_Obituary.pdf](https://www.stwalley.com/bill/William_Stwalley_Obituary.pdf)

William Stwalley Eulogy:

[https://www.stwalley.com/bill/William\\_Stwalley\\_Eulogy\\_by\\_Ken\\_Stwalley.pdf](https://www.stwalley.com/bill/William_Stwalley_Eulogy_by_Ken_Stwalley.pdf)