

Curriculum Vitae
F. Dean Toste
University of California, Berkeley

Education and Training

Ph.D. Chemistry, Stanford University, Stanford, CA (2000) (*Prof. B. M. Trost*)
M.Sc. Chemistry, University of Toronto, Toronto, ON, Canada (1995) (*Prof. I. W. J. Still*)
B.Sc. Chemistry and Biochemistry, University of Toronto, Toronto, ON, Canada (1993)

Research and Professional Experience

2017-present Gerald E. K. Branch Distinguished Professor, UC Berkeley
2009-2017 Professor, Department of Chemistry, UC Berkeley
2007-present Faculty Scientist, Chemical Sciences Division, LBNL
2006-2009 Associate Professor, Department of Chemistry, UC Berkeley
2002-2006 Assistant Professor, Department of Chemistry, UC Berkeley
2001-2002 Postdoctoral Research Associate, Caltech (*Prof. R. G. Grubbs*)

Fellowships and Awards

Elected Fellow of the American Academy of Arts and Science (2018); Royal Society of Chemistry, Catalysis in Organic Chemistry Award (2018); Janssen Prize for Creativity in Organic Synthesis (2018); Humboldt Research Award, Germany (2016); Elected Fellow of the Royal Society of Canada – Academy of Science (2015); German Chemical Society (GDCh), Horst-Parcejus Preis (2015); American Chemical Society, Creativity in Synthetic Organic Chemistry Award (2015); Mitsui Catalysis Award (2014); Miller Professorship, UC Berkeley (2014); Society of Synthetic Organic Chemistry Japan, Mukaiyama Award (2011); Tetrahedron Young Investigator Award (2011); Fellow of the Royal Society of Chemistry (2010); Royal Society of Chemistry, Merck Award (2010); Solvias Ligand Prize (2009); Thieme-IUPAC Prize in Synthetic Organic Chemistry (2008); American Chemical Society, Elias J. Corey Award (2008); BASF Catalysis Award (2007); Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS) Award (2007); Novartis Young Investigator Award (2006); Novartis Chemistry Lectureship (2006-2007); Roche Excellence in Chemistry Award (2006); American Chemical Society, Cope Scholar Award (2006); Taiwan National Science Council Visiting Scholar (2006); AstraZeneca Excellence in Chemistry Award (2005); Chevron Chair, UC Berkeley (2004-2006); Pfizer Research Laboratories Creativity in Organic Synthesis Award (2005); Amgen Young Investigator (2005); Japan Society for the Promotion of Science Fellowship (2005); Abbott Laboratories New Faculty Award (2005); Alfred P. Sloan Research Fellowship (2005); BMS Unrestricted Grant in Synthetic Organic Chemistry (2005); NSF CAREER Award (2005); GlaxoSmithKline Chemistry Scholar Award (2004); Eli Lilly Grantee Award (2004); Dupont Young Investigator Award (2004); Amgen New Faculty Award (2003); Boehringer-Ingelheim New Faculty Award (2003); Research Corporation, Research Innovation Award (2002); Camille and Henry Dreyfus New Faculty Award (2002); American Chemical Society, Nobel Laureate Signature Award (2002); Roche Award for Excellence in Organic Chemistry (1999); Stanford University Fellow (1996-2000); NSERC (Canada) Pre-Doctoral Fellow (1995); Ontario Graduate Fellow (1994, 1995); George F. Wright Award (1994); MV Redman Award (1993); Chemical Industry Merit Award (1993)

Selected Publications (from >250; >25000 citations, h-index: 95)

1. "A Catalytic Fluoride-Rebound Mechanism for C(*sp*)-CF₃ Formation." Levin, M. D.; Chen, T. Q.; Neubig, M. E.; Hong, C. M.; Theulier, C. A.; Kobylanskii, I. J.; Janabi, M.; O'Neil, J. P.; Toste, F. D. *Science*, **2017**, *356*, 1272-1276.
2. "Redox-Based Reagents for Chemoselective Methionine Bioconjugation." Lin, S.; Yang, X.; Jia, S.; Weeks, A. M.; Hornsby, M.; Lee, P. S.; Nichiporuk, R. V.; Iavarone, A. T.; Wells, J. A.; Toste, F. D.; Chang, C. J. *Science* **2017**, *355*, 597-602.
3. "High Spatial Resolution Mapping of Catalytic Reactivity on Pt Nanoparticles." Wu, C.-Y.; Wolf, W. J.; Levratovsky, Y.; Bechtel, H. A.; Martin, M. C.; Toste, F. D.; Gross, E. *Nature*, **2017**, *541*, 511-515.
4. "A Supramolecular Microenvironment Strategy for Transition Metal Catalysis." Kaphan, D. M.; Levin, M. D.; Bergman, R. G.; Raymond, K. N.; Toste, F. D. *Science* **2015**, *350*, 1235-1237.
5. "A Data-Driven Approach to Mechanistic Elucidation in Chiral Anion Phase Transfer Catalysis." Milo, A.; Nell, A. J.; Toste, F. D.; Sigman, M. S. *Science*, **2015**, *347*, 737-743.
6. "Redox Tunable Gold Catalysis: Accessing Divergent Reactivity via Carbon-Carbon Bond Activation." Wu, C.-Y.; Horibe, T.; Jacobsen, C. B.; Toste, F. D. *Nature* **2015**, *517*, 449-454.

7. "Integration of Chemical Catalysis with Extractive Fermentation to Produce Fungible Fuels." Anbarasan, P.; Baer, Z. C.; Sreekumar, S.; Gross, E.; Binder, J. B.; Blanch, H. W.; Clark, D. G.; Toste, F. D. *Nature* **2012**, *491*, 235-239.
8. "Asymmetric Electrophilic Fluorination Using an Anionic Chiral Phase-Transfer Catalyst." Rauniyar, V.; Lackner, A. D.; Hamilton, G. L.; Toste, F. D. *Science* **2011**, *334*, 1681-1684.
9. "Asymmetric Brønsted Acid Catalyzed Hydroamination of Dienes." Shapiro, N. D.; Rauniyar, V.; Hamilton, G. L.; Wu, J.; Toste, F. D. *Nature*, **2011**, *470*, 245-250.
10. "A Powerful Chiral Counterion Strategy for Asymmetric Transition Metal Catalysis." Hamilton, G. A.; Kang, E. J.; Blázquez, M. M.; Toste, F. D. *Science* **2007**, *317*, 496-499.
11. "Relativistic Effects in Homogenous Gold Catalysis." Gorin, D. J.; Toste, F. D. *Nature* **2007**, *446*, 395-403.

Selected Invited Lectures

Cornell University (*Baker Symposium*), May 5, 2018; University of Illinois-Chicago (*Moriarty Lectureship*), April 24-25, 2018; The Scripps Research Institute (*Bristol-Myers Squibb Lecture*), June 2, 2017; Columbia University (*Stork Lecture*), Mar. 30, 2017; Boston College (*Strem Lecture*), September 9, 2016; University of Michigan (*Novartis Lecture*), May 4, 2016; McMaster University (*Sigma Aldrich Lecture*), April 14, 2016; Princeton University (*Novartis Lecture*), May 7, 2014; University of North Carolina (*Sigma Aldrich Lecture*), February 7, 2014; MIT (*Boehringer-Ingelheim Lecture*), May 9, 2013; Nankai University (*Nankai Lectureship on Organic Chemistry*), Dec 21, 2012; University of Illinois (*Fuson Lectureship*), Oct 1-2, 2012; University of Pennsylvania (*Novartis Lecture*), Apr 3, 2012; Harvard University (*Pfizer Lecturer*), Oct 17, 2011; Université de Sherbrooke (*Boehringer-Ingelheim Distinguished Lecturer*), Oct 5, 2011; University of Chicago, (*Organic Synthesis Lecture*), Feb. 28, 2011; University of Rochester (*Kende Lectureship*), Mar 31-Apr 2, 2010; Imperial College London (*Eli Lilly Lecture*) Nov. 24., 2009; University of Minnesota (*Eli Lilly Lecture*) May 7, 2009; University of Ottawa (*Astra Lecture*), Feb. 12, 2009; University of Oklahoma (*Karcher Lecture*), Norman, OK, Dec 4, 2008; University of Wisconsin (*McElvain Lecture*), May 2, 2007; Cambridge University (*Novartis Lecture*), Mar 1, 2007; Yale University (*Treat B. Johnson Lecture*), Jan 31, 2007; Université de Montréal (*MethylGene Lecture*), Nov 29, 2006; University of British Columbia (*Merck Frosst Lecture*), Nov 22, 2005. Institut für Organische Chemie, RWTH Aachen (*Lilly Lecture*), July 15, 2005.

Selected Plenary/Keynote Lectures

International Symposium on Fluorine Chemistry (*Plenary Lecture*), Oxford, UK (July 25, 2018); Belgium Organic Synthesis Symposium (*Plenary Lecture*), Brussels, Belgium (July 10, 2018); PERCH-CIC 2018 (*Plenary Lecture*), Pattaya, Thailand (July 5, 2018); Elemento-Organic Chemistry Symposium (*Plenary Lecture*), Nankai University, Tianjin, China (July 14, 2017); International Conference on Organic Synthesis (*Plenary Lecture*), Mumbai, India (Dec 15, 2016); International Symposium of Catalysis and Fine Chemical (*Keynote Lecture*), Taipei, Taiwan (Nov 11, 2016); Iberoamerican Symposium on Organic Chemistry (*Plenary Lecture*), Porto, Portugal (Sept. 23, 2016); Belgium Organic Synthesis Symposium (*Plenary Lecture*), Antwerp, Belgium (July 15, 2016); Dombay Organic Chemistry Conference (*Plenary Lecture*), Dombay, Russia (June 2, 2016); Molecular Chirality Asia 2016 (*Plenary Lecture*), Osaka, Japan (April 20, 2016); 18th JCF-Fruhjahrssymposium (*Plenary Lecture*), Kiel, Germany (March 16, 2016); Torkil Holm Symposium (*Plenary Lecture*), Copenhagen, Denmark (Jan 30, 2016); Sultan Qaboos University International Chemistry Conference (*Plenary Lecture*), Muscat, Oman (Nov 10, 2015); 25 International Society of Heterocyclic Chem. Congress (*Plenary Lecture*), Santa Barbara, CA (Aug 24, 2015); IUPAC World Chemistry Congress (*Keynote Lecture*), Busan, Korea (August 12, 2015); Gold 2015 World Conference (*Plenary Lecture*), Cardiff, Wales (July 29, 2015); European Symposium on Organic Chemistry (*Plenary Lecture*), Lisbon, Portugal (July 15, 2015); 8th Singapore International Chemistry Conference (*Keynote Lecture*), Singapore (December 16, 2014); Frontiers in Biorefining (*Plenary Speaker*), St. Simons Island, GA (Oct 22, 2014); Annual Centre in Green Chemistry and Catalysis Symposium (*Plenary Lecture*), Montreal, Canada (May 9th, 2014); Portuguese National Meeting on Organic Chem. (*Plenary Lecture*), Lisbon, Portugal (Sept 5, 2013); Jahrestreffen Deutscher Katalytiker (*Plenary Lecture*), Weimar, Germany (March 12, 2013); Florida Heterocyclic and Synthetic Conference (*Plenary Lecture*), Gainesville, FL (Mar 3-6, 2013); Chinese Chemical Society Annual Meeting (*Keynote Lecture*), National Tsing Hua University, Hsin-chu, Taiwan (Dec 4, 2011); Journées de Chimie Organique (*Plenary Lecture*), Palaiseau, France (Sep 21-23, 2010); Groupe D'Etude en Chimie Organique-51, (*Plenary Lecture*), Montpellier, France (Aug 29-Sep 3, 2010); Balticum Organicum Syntheticum (*Plenary Lecture*), Riga, Latvia (June 27-30, 2010); Brazilian Meeting on Organic Synthesis (*Plenary Lecture*), São Pedro,

Brazil (Sept. 1, 2009)