

Norm Dovichi



Norm Dovichi holds the Endowed Professorship of Analytical Chemistry at the University of Washington. He received his BSc in Chemistry and Mathematics at Northern Illinois University and his PhD in Physical Analytical

Chemistry at the University of Utah, where he was Joel Harris's first student. He spent two years at Los Alamos Scientific Laboratory with Dick Keller before starting his academic career at the University of Wyoming. He moved to the University of Alberta in 1986 and to his present position in January 2001. Dovichi has supervised 39 PhD theses, has published over 200 papers and book chapters, holds seven US patents, and has given over 350 invited talks. He has served on the editorial advisory boards of 16 journals, serves as Associate Editor for *Analytical Chemistry*, the Editor for the Chemical Analysis book series published by Wiley, and is a permanent member of the EBT study section at the National Institutes of Health. He has served on the Natural Sciences and Engineering Research Council, the board of the Canadian Genetic Diseases Network, and the scientific advisory board of Alberta Ingenuity. Dovichi has received a number of honors for his work. These include the Chemical Instrumentation Award and the Spectrochemical Analysis Awards from the American Chemical Society. The Canadian Institute of Chemistry recognized him with the McBryde, Noranda, and Fisher. He received the Heinrich Emanuel Merck Award for Analytical Chemistry. He has also been named as an Honorary Professor of the Chinese Academy of Sciences. Finally, the journal *Science* included Dovichi as the only chemist among their list of a dozen "Unsung Heroes of the Human Genome Project".

3M Lecturers:

- 1962 **Sir Derek H.R. Barton, Imperial College**
- 1963 Sir Ronald Nyholm, University College
- 1964 F. C. Tompkins, Imperial College
- 1965 S. Winstein, U.C.L.A.
- 1966 F. A. Cotton, M.I.T.
- 1967 J. O. Hirschfelder, Wisconsin
- 1968 A. Eschenmoser, E.T.H., Switzerland
- 1969 **H. Taube, Stanford**
- 1970 S.A. Rice, Chicago
- 1971 F.H. Westheimer, Harvard
- 1972 R.G. Pearson, Northwestern
- 1973 W.A. Klemperer, Harvard
- 1974 G. Stork, Columbia
- 1975 R. J. P. Williams, Oxford
- 1976 J. A. Morrison, McMaster
- 1977 D. Arigoni, E.T.H., Switzerland
- 1978 J. Chatt, Sussex
- 1979 **J. A. Pople, Carnegie-Mellon**
- 1980 W.P. Jencks, Brandeis
- 1981 J. Halpern, Chicago
- 1982 Sir John Meurig Thomas, Cambridge
- 1983 R. Breslow, Columbia
- 1984 M. L. H. Green, Oxford
- 1985 **D. R. Hershbach, Harvard**
- 1986 **J. M. Lehn, Strasbourg**
- 1987 M. H. Chisholm, Indiana
- 1988 **R.A. Marcus, Cal. Tech.**
- 1989 **D.J. Cram, U.C.L.A.**
- 1990 D. Seyferth, M.I.T.
- 1991 D. A. Shirley, Berkeley
- 1992 K. U. Ingold, NRC
- 1993 H. Schmidbauer, Munich
- 1994 A. J. Bard, U. Texas, Austin
- 1996 R. Huisgen, Munich
- 1998 Jean M. J. Frechet, Berkeley
- 1999 Robert W. Field, M.I.T.
- 2000 Ian Dance, New South Wales
- 2001 K.C. Nicolaou, San Diego
- 2002 R.R. Birge, Connecticut/Syracuse
- 2003 D. Fenske, Univ. Karlsruhe, Germany
- 2005 A. Padwa, Emory University, Atlanta
- 2006 N. Dovichi, Washington State



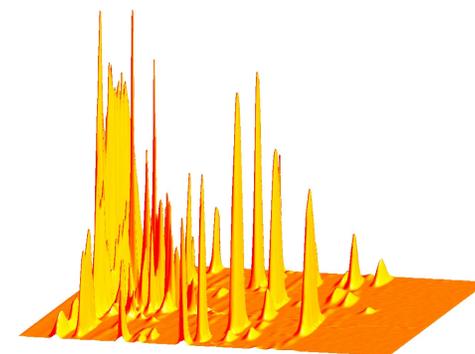
The UNIVERSITY of WESTERN ONTARIO

**The 3M University Lecturer
in Chemistry
2006**

NORM DOVICH

Endowed Professor of
Analytical Chemistry

Department of Chemistry
University of Washington
Seattle, WA



Prof. Dovichi will present three lectures:

Wednesday, February 15th, 2006

4:30 p.m.

SH3345 (Somerville House Bldg. UWO)

Lecture #1 - The Role of Analytical Chemists in the Sequencing of the Human Genome

The completion of the human genome project represents a milestone in the history of science. After a dozen years' work, we now have the blueprint for life. The generation of that blueprint, ahead of schedule and well under budget, required advances across a wide range of science. In this talk, I'll review the development of high speed DNA sequencing technology and its role in the genome project.

Contact

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Thursday, February 16th, 2006

4:30 p.m

SH3345 (Somerville House Bldg.)

Lecture #2 - Ultrasensitive Detection of GFP Fusion Proteins in Single Cells

We use genetic engineering to create fluorescent chimeric proteins by fusing the gene for Green Fluorescent Protein to a target gene. This approach results in exquisite selectivity in the incorporation of the label. When coupled with high sensitivity fluorescence detection, it allows the study of the expression of rare proteins and their post-translational modifications. Two examples of this technology will be presented. In the first, we monitor protein expression and post-translational modification at the single copy level in single cells of the common baker's yeast, *S. cerevisiae*. In the other, we monitor stochastic gene expression in the bacterium *D. radiodurans*, which presents an example of an inducible two-state system.

**Coffee and Donuts will be served
15 minutes prior to the talks outside the
lecture room.**

Friday, February 17th, 2006

10:30 a.m.

****PLEASE NOTE UNUSUAL TIME****

University Hospital, Auditorium A

3rd Floor

(off connecting hallway to Dental Sciences)

Lecture #3 - Single Cell Proteomics

It is now possible to generate one- and two-dimensional electrophoresis data from single mammalian cells. These separations are capable of resolving hundreds of components from the cell, and the data can be correlated with cell cycle and other properties of the cells. Examples have been generated from breast, prostate, colon, and esophageal cancer cell lines, from astrocytes and neurons, and from osteoprecursors and myoblasts. Instrumentation is under development that can characterize tens of thousands of cells per day in one-dimensional electrophoresis and thousands of cells per day in two-dimensional electrophoresis.

Our website: <http://www.uwo.ca/chem/>