John Birks
Biographical Sketch

Dr. John W. Birks is co-founder and President of 2B Technologies, Inc., Director of the Global Ozone Project and President of the Boards of Directors of the GO3 Foundation and Estes Park Environmental Center. He is Professor Emeritus of Chemistry and Biochemistry, where he served as department Chair, and Fellow Emeritus of the Cooperative Institute for Research in Environmental Sciences (CIRES) of the University of Colorado, Boulder. John earned a B.S. degree in Chemistry with High Honors at the University of Arkansas, Fayetteville in 1968 and a Ph.D. in Chemistry at the University of California, Berkeley in 1974 under the direction of Professor Harold Johnston.

Dr. Birks began his academic career at the University of Illinois at Urbana-Champaign in 1974 where he established a research group in atmospheric chemistry. In 1977 Prof. Birks moved his research group to the University of Colorado where he could collaborate more closely with CIRES, NCAR and NOAA scientists. Prof. Birks is best known for quantifying the rates of several chemical reactions key to understanding ozone depletion in the Antarctic “ozone hole”, his seminal work in 1981/82 with Paul Crutzen (Nobel Laureate, 1995) in developing the “nuclear winter” theory, and his invention, development and commercialization of miniaturized instruments for air pollution monitoring. Prof. Birks has published more than 130 scientific papers, edited 4 books, and holds 9 U.S. patents. He has supervised the research of 39 students earning the Ph.D. degree and 9 students earning M.S. degrees. His awards include Alfred P. Sloan and John Simon Guggenheim Fellowships, the Thomas Jefferson Award of the University of Colorado, the Witherspoon Peace and Justice Award, the Colorado Section Award of the American Chemical Society, the Leo Szilard Award for Physics in the Public Interest of the American Physical Society, and the American Chemical Society Award for Creative Advances in Environmental Science and Technology. He was the recipient of the 2000 Hazel Barnes Prize, the highest faculty award of the University of Colorado.

After 25 years of service, in 2002 Prof. Birks retired from the University of Colorado and joined 2B Technologies, a company he co-founded with Dr. Mark Bollinger in 1998. At 2B Tech, Dr. Birks is working with a team of scientists and engineers to develop a new generation of instrumentation for environmental analysis. He also is co-founder and Executive Vice President of InDevR, a Boulder biotech company specializing in the invention and development of new analytical instrumentation for the biomedical sciences. 2B Tech and InDevR are co-located in Boulder, Colorado.

In 2010, Dr. Birks founded the Global Ozone Project or "GO3 Project" where middle and high school students around the world measure ozone and meteorological parameters outside their schools and upload their data to the GO3 database for display on Google Earth. More than 100 schools, including 35 international schools, have participated in the GO3 Project, which was recently expanded to include measurements of CO2 in the CO2 Experiment and Black Carbon in the Black Carbon Experiment. In the new GO3 Treks project, students measure ozone and black carbon along treks they design and carry out. The measurements are then uploaded and displayed on Google Earth in a blog format for discussion with other students around the world. In the GO3 Project students and other citizens around the world are creating the first global database for air pollutants.