

DPTO. QUÍMICA ANALÍTICA

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QUÍMICA ANALÍTICA
UCM

LIBS FOR GLOBAL HEALTH: DETECTING AND DIAGNOSING PATHOGENIC BACTERIA IN HUMAN CLINICAL SPECIMENS OF BLOOD, URINE, AND CEREBROSPINAL FLUID



Prof. Steven Rehse

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About the Speaker

Biography

Dr. Steven J. Rehse is a Professor of Physics and is currently the Head of the Department of Physics at the University of Windsor in Windsor, Ontario, Canada. He received a B.S. in Physics from Michigan Technological University in 1994 and performed his undergraduate thesis work at Los Alamos National Laboratory in New Mexico where he performed experiments to use laser-induced fluorescence and laser-induced breakdown spectroscopy to monitor and analyze high temperature ablation in refractory carbide materials in support of the nuclear thermal rocket program. After spending a year and a half at Los Alamos also working on the CALIOPE infrared LIDAR project, he attended Colorado State University in the Department of Physics where he received his M.Sc. and Ph.D. under the supervision of Dr. Siu Au Lee. His dissertation topic was the use of lasers to cool gallium atoms to allow their manipulation with resonant light-forces (cooling and trapping of atoms). After receiving his doctorate, he was a post-doctoral fellow at the University of Western Ontario in London, Ontario, Canada from 2002-2005 before accepting an assistant professorship at Wayne State University in Detroit, Michigan. He was at Wayne State from 2005-2011 before relocating across the Detroit River to Windsor, where he was hired to lead a new undergraduate medical physics program. He has been at the University of Windsor since 2011 and conducts research into the use of the laser-based spectrochemical analysis technique known as "laser-induced breakdown spectroscopy," particularly to analyze samples of medical interest, most specifically pathogenic bacteria.

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