ACS Local Section California

The wonders of a 400 MHz HTS magnet system, how it works and our results at Amgen

Friday – June 21., 2024 – 10:00 to 11:00 AM PDT

FREE Online Zoom Event

Our Distinguished Panelist:

Maria Silva Elipe, Scientific Associate Director

NMR Technology | Amgen

RSVP here!

Zoom link to be shared with attendees the day of the event.

The discovery of new ceramic materials containing Ba-La-Cu oxides in 1986 exhibiting superconductive properties at high temperatures (35 K or higher), opened a new world of opportunities for NMRs and MRIs to move away from liquid cryogens, recognized with the Nobel Prize in Physics in 1987.

A prototype 400 MHz high temperature superconducting (HTS) power-driven magnet NMR spectrometer was installed at Amgen's chemistry laboratory to be tested for a variety of applications, structure analysis, reaction monitoring, and CASE-3D studies with RDCs. The HTS "cryofree" magnet does not required liquid cryogens refills and has a smaller footprint than a comparable low temperature superconducting (LTS) magnet, with stability as the unknown factor of this technology. Our evaluation of its performance was successful.

María Victoria Silva Elipe, PhD, is a Process Development Scientific Associate Director who works at Amgen, Inc., since 2003 as NMR Leader at the Attribute Sciences department supporting drug development from early clinical stages to commercial for small molecules and hybrid modalities. Her work focuses on low and high field NMR on structure characterization, reaction monitoring, and quantitation for synthetic and hybrid modality programs, and TD-NMR applications for small and large molecules. Prior to that, she worked for Merck & Co., Inc., as NMR spectroscopist for the DMPK department on the structure of metabolites by NMR and LC-NMR and supported medicinal chemistry for synthetic small molecules and peptides. She obtained her Ph.D. in Natural Products Chemistry at the University of Málaga, Spain, in 1991, focused on isolation, synthesis, and structure characterization of natural products. After that, she worked in the field of marine natural products for Pharma Mar, S.A., in Madrid, Spain, and for Prof. Kenneth Rinehart at the University of Illinois at Urbana-Champaign. Then she worked on protein and protein-DNA complex structures by NMR for Prof. David Kearns at the University of California, San Diego. Before she moved to industry, she worked as an Assistant Professor of Chemistry at the University of San Diego. Currently she is also a lecturer for the chemistry department at California State University, Channel Islands, since 2014.

The event is FREE and open to the community.

More information at: calacs.org or email mozafari.mina20@gmail.com