

California Section American Chemical Society



All are welcome

Saturday, February 16, 2019

USDA, 800 Buchanan street, Albany, CA
94720

Title

Sugar-derived Lubricants: a High-performance,
Ecofriendly Alternative to Petroleum-derived
Lubricants

Time

10:30 – 11:00 a.m.
Snacks and coffee,

11:00 a.m.
Discussion and lunch

Reservation

Please register (including lunch or for talk only)
by email to office@calacs.org or by phone
510.351.9922. If mailing a check in advance,
please make payable to: "California Section
ACS" and send to Cal Section office, 2950
Merced Street #225, San Leandro, CA 94577,
postmarked no later than Feb 1, 2019.

Cost

Technical discussion is free

\$15 lunch (\$7 for students and the
unemployed)

Directions

From I-80 W: Take the Albany Exit, and make
a left turn onto Cleveland Avenue at the stop
sign. Parallel the railroad tracks, and stay on
that road until the end, when you must turn left
and drive past a USDA gate (on your right).
You will reach a signal stop at Pierce and
Buchanan; prepare to stop. Stay in the right
lane because you will make a right turn very
soon into the USDA driveway, where you will
be met by a USDA representative for entrance
to parking.

From I-80 E: Take the Albany Exit, and exit
toward the right at the top of the off-ramp. You
will now be on Buchanan Street. Drive toward
the signal stop at Pierce and Buchanan;
prepare to stop. Stay in the right lane because
you will make a right turn very soon into the
USDA driveway, where you will be met by a
USDA representative for entrance to parking.

A couple of links to driving directions and
public transit options can be found on:

<https://www.ars.usda.gov/pacific-west-area/albany-ca/wrrc/>

About the Speakers



Dr. Paula Vettel

Dr. Paula Vettel is Technical Director,
Formulations and Regulatory at Novvi LLC. She
has a Ph.D in Organic Chemistry from the
University of Illinois at Urbana-Champaign. She
had eleven years of experience with Amoco
Petroleum Additives in the research and
development of engine oil additives and
formulation development and sixteen years
research experience with D.A. Stuart Company in
the areas of automotive and industrial gear oils,
hydraulic fluids, straight oils, forging compounds,
and mining hydraulic fluids. She has been with
Novvi LLC, in Emeryville California for eight
years, developing new industrial and automotive lubricants using
renewable synthetic base oils. Dr. Vettel is an active member of ASTM,
STLE, SAE, and ACS.



Lynn Rice

Lynn Rice is a Formulations Engineer at Novvi
LLC. She has a M.S.E. in Chemical Engineering
from University of California Los Angeles and a
B.S.E. in Chemical Engineering from Tulane
University. She worked for over five years at
Chevron Oronite in a variety of roles, including
component development, ZDTP Process
Engineering and Formulation of Gear Oils prior to
joining Novvi.

Abstract

It's time for an oil change. Did you know that traditional motor oil comes
from a highly-specific distillation cut of crude oil comprising < 1% of a
barrel's total volume? Synthetic oil comes from processing separate cuts
of distillate that are also in limited concentrations in crude oil. Isn't there a
better choice? Thanks to Novvi LLC's technology where motor oil is
synthesized from plant-based starting materials, the answer is now "yes":

In this presentation, Novvi's NovaSpec™ base oils, biodegradable and
renewable hydrocarbons that match the stringent performance
requirements of synthetic base oils, will be introduced. The production of
these oils from biosynthetically-derived Farnesene will be described. Their
molecular structure and performance on critical tests will be compared to
the structures and performance of traditional petroleum-derived base oils
and alternative eco-friendly base stocks. Additionally, key tests that define
base oil renewability will be explained.

