

**California Section
American Chemical Society**



**All are welcome
Saturday, February 21, 2026**

Title

**Translating Science: Making
Mass Spectroscopy Accessible
in Cultural Institutions**

Time

10:30 – 11:00 am
Chatting

11:00 am
Talk and Discussion

Reservation

Please visit the CalACS website www.calacs.org to register for this meeting or use Event Brite.

RSVP here!

Please register before Thursday, February 19, 2026, 12 noon. Your email address is needed to send the ZOOM link, which will be shared with attendees on or before the day of the event via Event Brite.

Cost

Free!

About the Speaker



Alba Alvarez Martin, PhD

Alba Alvarez Martin is a chemist with a PhD obtained from the University of Salamanca (Spain) in environmental sciences. She also holds a master's degree in conservation science. During 2017 she worked at Antwerp University (Belgium) studying the effect that inorganic pigments have on the discoloration of organic lakes used by Van Gogh. Between 2017 and 2020 she was a Postdoctoral Fellow at the Smithsonian's Museum Conservation Institute, Washington, DC. In USA, her research involved the study of volatile organic compounds (VOCs) emitted by museum collections. From 2020 to 2021 she worked as a postdoc at the Rijksmuseum. In 2021 she received a Marie Skłodowska-Curie fellowship where she developed a new protocol to image cross sections by high resolution mass spectrometry. In 2022 she worked as senior researcher at the Royal Museum for Central Africa. In June 2023 she was appointed research scientist at the Rijksmuseum, where her main research goals are the implementation of more accessible mass spectrometry instrumentation in museums.

Abstract

Analyzing organic materials in artworks has long been associated with destructive techniques, which can be a major limitation when working with delicate or historically important objects. Recent developments, in both instruments and sampling strategies, have opened the door to approaches that require little to no intervention on the object itself. In this talk, I will share our experience implementing a very sensitive sampling method that brings together collection and concentration of volatiles emitted by art objects. This has proven especially useful as a screening tool when taking a physical sample simply is not an option.

We tested instrumentation developed for other research fields, such as environmental research or clinical studies, for the first time and compared their performance with more established alternatives in the museum laboratories. The methods have performed remarkably well in identifying volatile compounds in enclosed spaces at the Rijksmuseum, and it has allowed us to look at the molecular profile emitted from the back of canvas paintings as part of condition monitoring. Finally, we worked toward automating part of the workflow, offering a more efficient and consistent alternative to lengthy passive sampling approaches.

Questions?

Please contact Elaine Yamaguchi at eyamaguchi08@gmail.com