



**Chemistry: Catalysing solutions  
to global challenges**

Royal Australian Chemical Institute  
National Congress 2022

Brisbane | Australia

Sun 3 – Fri 8  
July | 2022

Brisbane Exhibition &  
Convention Centre

ADVERTISEMENT

Hosted by RACI ROYAL AUSTRALIAN  
CHEMICAL INSTITUTE

WWW.RACI2022.COM

(<https://www.raci2022.com/>)

# Full Schedule & My Itinerary

Through this page you will:

- Add Sessions or Presentations to Your Calendar (Click "Add to Calendar")
- Add Sessions or Presentations to Itinerary with the Platform (Click "Add to Itinerary")
- Join Live Sessions (Click "Attend Session" and a Zoom window will open for Scientific Sessions)

Below is the full schedule for Pacificchem 2021. Within this page you can search for a Symposia Title, Presentation Title, and/or Presenter Name; and filter by Date, Topic Area, and Session Type. You can also change the preferred time zone so you can view in your own timezone (the default is Hawaii Standard Time).

For best search results please put the words you are searching in quotation marks. For example, if you want to view all sessions and talks for a symposia please put the full symposia name in the search field between quotation marks.

Collapse All

↻ Submit
↺ Reset (<https://pacificchem.digitellinc.com/pacificchem/live/5/page/47/1>)

Advanced Filters ▼

**Filter by Date**

**Topic Area**


**Session Type**

Live Support

No Upcoming Sessions Only

### Preferred Time Zone

Eastern Standard Time (EST) 

 Event Itinerary

 My Itinerary 2

### Analytical Development Relevant to Environmental Exposure and Effects (#27)

06:00pm - 10:00pm Eastern Standard Time (EST) - December 18, 2021 | Room: Virtual

Xing-Fang Li, Session Host; Prof. Dongchan Jang, Session Host

Topic Area: (01) Analytical

Session Type: Oral - Virtual

 (<https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary>)

Topic Area: (01) Analytical

Symposium Organizers: X. Li, S. Richardson, G. Jiang, S. F. Nakayama

### Resolving identities of emerging per and polyfluoroalkyl substances isomers based on COSMO-RS derived retention factor and mass fragmentation patterns

Saturday

06:45pm - 07:15pm Eastern Standard Time (EST) - December 18, 2021 | Room: Virtual

Scott Simpson, Presenter; Mary Grace Guardian; Diana Aga

Topic Area: (01) Analytical

Session Type: Oral - Virtual

 (<https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary>)

Chromatographic retention times and mass spectrometral fragmentation of per- and polyfluoroalkyl substances (PFASs) standards were determined using the optimized parameters obtained for liquid chromatography with tandem high-resolution mass spectrometry (LC-HRMS) analysis. Characteristic fragment ions obtained at various collision energies ( $MS^2$  fragmentation) were used for structural elucidation to predict the identities of newly discovered (emerging) PFASs detected in environmental samples. Moreover, the COnductor-like Screening MOdel for Realistic Solvents (COSMO-RS) was used to calculate the octanol-water partition coefficients ( $K_{ow}$ ) and mean isotropic polarizabilities of known PFASs, and the values were plotted against their chromatographic retention factors ( $k$ ) to obtain a multivariable regression model that can be used to predict  $k$  values of unknown PFASs. Retention factor values of different structural isomers of the unknown PFASs were calculated and compared to the experimental  $k$ . For all the unknown PFASs, the predicted  $k$  value for the isomer that matches the corresponding  $MS^2$  fragmentation was found to be within 5% of the experimentally measured  $k$  value. This study demonstrates the applicability of a simple approach that combines the computationally-derived  $\log K_{ow}$  and polarizabilities, experimentally-determined  $k$  values, and  $MS^2$  fragmentation patterns.

 Live Support

observed MS<sup>2</sup> fragmentation patterns, in assigning the structures of emerging PFASs at environmentally relevant conditions when no reference standards are available.

### Hydrogen-rich systems: Materials chemistry for energy storage and delivery (#163)

01:00pm - 05:00pm Eastern Standard Time (EST) - December 21, 2021 | Room: Virtual

Godwin Severa, Session Host; Vitalie Stavila, Session Host


Topic Area: (12) Chemistry of Energy

Session Type: Oral - Virtual

[+](https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary) (https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary)

Topic Area: (12) Chemistry of Energy

Symposium Organizers: Z. Huang, M. Bowden, C. Yoon, T. HE, G. Severa

Search for molecular corks beyond carbon monoxide: A quantum mechanical study of N-heterocyclic carbene adsorption on Pd/Cu(111) and Pt/Cu(111) single atom alloys 

Tuesday

04:05pm - 04:30pm Eastern Standard Time (EST) - December 21, 2021 | Room: Virtual

Scott Simpson, Presenter

Topic Area: (12) Chemistry of Energy

Session Type: Oral - Virtual

[✗](https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary) (https://pacifichem.digitellinc.com/pacifichem/rest/liveevents/itinerary)