2020 Winter Conference on Plasma Spectrochemistry
Tucson, Arizona
January 13 - 18, 2020
El Conquistador Tucson
A Hilton Resort
Exhibition Information
The 2020 Winter Conference on Plasma Spectrochemistry, 21st in a series of biennial meetings sponsored by the *ICP Information Newsletter*, features developments in plasma spectrochemical analysis by inductively coupled plasma (ICP), dc plasma (DCP), microwave plasma (MIP), glow discharge (GDL, HCL), and laser sources (LA, LIBS). The meeting will be held Monday, January 13 through Saturday, January 18, 2020, in Tucson, Arizona, (www.visitTucson.org) at the El Conquistador Tucson Resort (www.hiltonelconquistador.com). Professional development short courses at introductory and advanced levels and manufacturers’ seminars will be offered Friday through Monday, January 10 - 13. Spectroscopic instrumentation and accessories will be shown during a three-day exhibition from January 14 to 16, and workshops on New Plasma Instrumentation, Clinical ICP-MS, Isotope Analysis, Elemental Imaging and Mass Cytometry, and Elemental Speciation methodology will be presented Tuesday thru Friday afternoons.

**Objectives and Program**

The continued growth in popularity of plasma sources for atomization and excitation in atomic spectroscopy and ionization in mass spectrometry and the need to discuss recent developments of these discharges in spectrochemical analysis stimulated the organization of this meeting. The Conference will bring together international scientists experienced in applications, instrumentation, and theory in an informal setting to examine recent progress in the field. Approximately 500 participants from 30 countries are expected to attend.

Over 300 papers describing applications, fundamentals, and instrumental developments with plasma sources will be presented in lecture and poster sessions by more than 200 authors. Symposia organized and chaired by recognized experts will include the following topics: 1) Sample introduction and transport phenomena; Micronebulization and flow processing spectrochemical analysis; 2) Nanomaterial analysis and characterization; 3) Elemental speciation, metallomics and sample preparation for speciation; 4) Plasma instrumentation, including advanced detectors, chemometrics, expert systems, online analysis, microplasmas, software, and remote-system automation; 5) Sample preparation, treatment and automation; 6) Excitation mechanisms, plasma phenomena and modeling; 7) Spectroscopic standards and reference materials, and high-purity materials; 8) Plasma source mass spectrometry; 9) Glow discharge atomic and mass spectrometry; 10) Stable isotope analyses; 11) Laser-assisted plasma spectrometry; 12) Advanced materials bulk and surface characterization, 13) Elemental imaging and mass cytometry, and 14) Novel plasma spectrochemical applications. Six plenary and 34 invited lectures will highlight advances in these areas. Four afternoon poster sessions will feature applications, automation, and new instrumentation. Six Heritage Lectures will be presented by distinguished scientists and investigators, who have contributed significantly to the development of plasma spectrochemistry and will address critical development areas in sample introduction, instrumentation, elemental speciation, plasma source mass spectrometry, and novel software and hardware. Awards for outstanding young investigators and senior researchers also will be presented. Plenary, invited, and submitted papers will be published in September 2020 after peer review as the official Conference proceedings.

**Schedule of Activities**

- **Call for Papers, Abstracts Due**, **Early Bird Registration**
  - Friday, July 12, 2019
- **Exhibitor Booth Reservation and Pre-Registration Due**
  - Friday, September 20, 2019
- **Final Abstracts for All Papers Due**
  - Friday, October 25, 2019
- **Exhibitor Reservation Deadline**
  - Friday, October 25, 2019
- **Conference Pre-Registration Deadline**
  - Friday, October 25, 2019
- **Hotel Reservation Deadline**
  - Friday, December 6, 2019
- **Late Pre-Registration Deadline**
  - Friday, December 13, 2019
- **2020 Winter Conference Professional Development Courses**
  - Friday-Monday, January 10 - 13, 2020
- **2020 Manufacturers’ Seminars**
  - Friday - Monday, January 10 - 13, 2020
- **2020 Winter Conference on Plasma Spectrochemistry**
  - Monday - Saturday, January 13 - 18, 2020
- **2020 Special Topic Workshops**
  - Tuesday - Friday January 14 - 17, 2020
- **2020 Instrument Exhibition**
  - Tuesday - Thursday, January 14 - 16, 2020
- **Conference Manuscripts Submission Deadline**
  - February 21, 2020
2020 Winter Conference on Plasma Spectrochemistry
Tucson, Arizona, January 13 – 18, 2020

Conference Background

THE MEETING

The biennial Winter Conference on Plasma Spectrochemistry is sponsored by the ICP Information Newsletter, Inc., a nonprofit, philanthropic research organization located in Hadley, Massachusetts and Lehigh Acres, Florida, and organized by Dr. Ramon Barnes of the University Research Institute for Analytical Chemistry. Previous meetings were held in Arizona, California, Florida, Hawaii, and Puerto Rico (Table). Attendance has grown from 170 in 1980 to more than 500 with world-wide scientific participation representing 30 countries. Technical sessions comprise lectures and posters describing application, fundamental, and instrumentation developments with popular electrical plasma sources. The inductively coupled plasma (ICP), glow discharge sources, microwave induced plasma, direct current plasma, and laser-assisted plasma spectrochemistry are featured. New spectrometric instrumentation, novel sample introduction systems, plasma system automation, sample preparation approaches, elemental speciation, spectroscopic standards, quality assurance, new diagnostic characteristics, and theoretical treatments are highlighted. More than 300 technical papers are presented, and selected papers have been published together as the Conference proceedings in Spectrochimica Acta, Part B (1981-1987), Journal of Analytical Atomic Spectrometry (1988-2018), and Journal of Analytical Bioanalytical Chemistry (1998-2006).

Some in the field consider the Winter Conference one of the technically most significant meetings convened on these topics. Eighteen European Winter Conferences have been held as well (Table). The next European Winter Conference will be in Lubljana, Slovenia (February 2021). Seven Asia-Pacific Winter Conferences have been held in China, Japan, Korea, and Thailand (Table).

THE PEOPLE

The Winter Conference attempts to bring together the major figures in the field of plasma spectrochemistry in a comfortable and informal setting to promote maximum information exchange and conversations. We accomplish this by inviting keynote speakers, employing principals to organize and chair sessions and discussions, and by offering technical short courses taught by experts. Furthermore, experienced and novice analytical chemists seeking to share their experiences in plasma spectrochemistry participate actively. Invited speakers include distinguished international experts and award recipients. Heritage lecturers, workshops, and symposia will be arranged and chaired by many of the leaders in the field.

THE LOCATION

Warm-weather sites are selected for the Winter Conference to promote the relaxed atmosphere conducive to effective scientific information exchanges. The 2020 Winter Conference will be held at the El Conquistador Tucson, a Hilton Resort, located in Tucson, Arizona, only 20 minutes north of the Tucson International Airport (www.flytucson.com) and conveniently served by major interstate highways. Tucson is 115 miles (184 km) south of Phoenix.

THE SCHEDULE

The 2020 Winter Conference will include activities beginning on Sunday, January 12, and continuing through Saturday, January 18. The Conference will be preceded on Friday, January 10, through Monday, January 13, by 50+ fee-based, professional short courses, each lasting four hours and presented by experts on specific topics. Simultaneously, exhibitors and other providers of plasma spectrochemical instruments, supplies, and related products will offer free seminars, training programs, or user’s meetings. The Conference begins with a social mixer Sunday evening, January 12, and convenes daily at 8:00 am until 6:30 pm. Lectures, posters, and panel discussions will be presented. Social gatherings are planned for evenings, and a Conference dinner is planned for Thursday evening, January 16 at the El Conquistador Tucson.

Winter Conference on Plasma Spectrochemistry

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European Winter Conference on Plasma Spectrochemistry

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<td>Welcome Social Mixer (Presidio Ballroom Foyer)</td>
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<td>Heritage Lecture (Presidio Ballroom)</td>
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<td>Exhibition Opening and Social Mixer (Turquoise Ballroom)</td>
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<td>Session 9 Short Courses (Breakout rooms)</td>
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<td>Registration (Conference Registration)</td>
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<td>Social Mixer (Turquoise Ballroom)</td>
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<td>Poster Session (Turquoise Ballroom)</td>
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<td>Workshop on Clinical ICP-MS (Presidio Ballroom)</td>
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<td>7:30 am - noon</td>
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<td>Workshop on Novel Instrumentation (Presidio Ballroom)</td>
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<td>Conference Closing (Presidio Ballroom)</td>
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Instrument Exhibition Information

INSTRUMENT EXHIBITION

The three-day exhibition will open on Monday evening, January 13, at 6:30 pm with the Grand Opening reception in the exhibition area (the Turquoise Ballroom and foyer). Spectroscopic instrumentation and chemicals, glassware, publications, and software supporting plasma spectroscopy will be displayed by up to 50 companies and organizations. Typically, new plasma spectrochemical instrumentation is previewed there. Provision for exhibit move-in and set up between noon and 5 pm on January 13 will be made with our contracted convention services organization, Inclusive Management Services (IMS). Sixty (60) standard 8 x 10-foot booths will be assembled in the Turquoise Ballroom exhibit area. To accommodate exhibitors and optimize contact with conference attendees, the exhibit will be open daily Tuesday through Thursday from 9:00 am to 6:30 pm. Afternoon poster sessions and two refreshment breaks also will be held in the exhibition areas as will the evening social mixers after the technical sessions end. The exhibition closes at 6:30 pm on Thursday, January 16, with dismantling and move-out beginning Thursday evening after 6:30 pm. All exhibitions will be removed by noon on Friday, January 17.

Unique Arizona Meetings with Resort Surroundings

A luxury destination resort just northwest of Tucson, the El Conquistador Tucson, a Hilton Resort, (www.HiltonElConquistador.com) is set amidst 500 acres in the foothills of the Santa Catalina Mountains in scenic Oro Valley. This 428-guest room resort is ideal for conferences or anyone seeking a recreational paradise. The El Conquistador offers among the most resort meeting space in Southern Arizona - 28 event spaces, plus outdoor venues totaling over 100,000 ft². The Presidio Ballroom will accommodate 780 schoolroom style, and the adjacent Turquoise Ballroom exhibition area (11,280 ft² = 120 ft by 94 ft) and Foyer will house up to 60 exhibition booths and 70 poster boards. In total this provides uncrowded space for the meeting and exhibition, posters, receptions, and conversations. Recreationally, the resort offers 45 holes of championship golf, 31 lighted tennis courts, five sparkling pools, spa therapy, a 24-hour fitness center, and horseback riding.

EXHIBITION SERVICES

Inclusive Management Services (IMS) of Fort Worth, Texas is a complete service contractor for trade shows and conventions. They have well-maintained equipment, drapery and furniture, and are able to offer sign, banner, electrical, photography, janitorial, labor, and drayage services. Booth equipment supplied to registered exhibitors includes a standard 8’ x 10’ draped exhibit booth with an 8’ high backdrap and 3’ high side dividers. A 7” x 44” two-line identification sign showing company name and booth number is also included. Furnishings (tables, chairs, etc.), labor (equipment installation/dismantle), drayage, electrical, and other services can be ordered by registered exhibitors directly from IMS by returning the order forms to be supplied in the IMS exhibitor service kit. Maximum flexibility to exhibitors is offered, so that prefabricated or special booths can be substituted and assembled with permission.

MANUFACTURER’S SEMINAR PROGRAM FOR PLASMA INSTRUMENTATION

An opportunity to maximize contact with established and potential customers is featured at the 2020 Winter Conference. During our weekend Short Course program, Friday through Monday, January 10-13, we now offer our exhibitors and/or producers or distributors of plasma spectrochemical instrument, supplies, and related products the opportunity to present a four-hour seminar, training/education program, or user’s meeting. For an inclusive fee of $600, we shall provide room, training facilities (excluding computer projectors), publicity, and program listing and abstracts in our Short Course announcements and program. This program will be free to participants, although registration will be required, and you and your colleagues will establish the seminar or training content. For example, new or advanced customer training, product introduction and/or demonstrations, product line descriptions, or user’s group meetings and discussions are appropriate subjects. These seminars will be presented in parallel with our fee-based short courses. They will be scheduled to minimize conflicts with complementary topics. The Seminar Program application form is found on page 16.

WORKSHOP ON NEW PLASMA INSTRUMENTATION

A Workshop on New Plasma Instrumentation will be held Tuesday afternoon, January 14, from 3:05 to 5:15 pm, with seven vendor presentations on plasma instrumentation, accessories, and sample preparation. Instrument manufacturers can describe new plasma source developments, and exhibitors can discuss sample introduction, alternative sources, and sample preparation. The Workshop will be organized and arranged by an experienced scientist. The afternoon program will parallel the exhibition and poster sessions.

The Workshop program will be divided into main sections: plasma source (ICP) atomic emission spectroscopy, plasma source (ICP) mass spectrometry, and plasma accessories (e.g., chromatograph interface, electrothermal vaporizer, laser and spark ablation, special nebulizers, preconcentration and sample introduction equipment, special adapter kits), standards and sample preparation. Representatives from companies and/or exhibitors can present brief (10 minute) technical descriptions and discussions of their new products and design philosophy. Each contributing company also may provide supplementary product literature, application notes, and presentation summaries. Questions and exchanges among speakers and the audience will be encouraged. Conferees may attend the workshop without charge, but speakers must register and pay a $300 Workshop fee when submitting their abstract before July 12. Workshop abstracts must be submitted in the same format and meet the same schedule as regular conference presenta-
tions (i.e., July 12, 2019, deadline for title and 50-word summary) and accompanied by the Workshop fee. A Workshop abstract form is available or the form on page 22 can be submitted noted with the word "Workshop on Plasma ...".

**OPPORTUNITIES FOR SPONSORS**

Numerous opportunities exist for your company to participate in the 2020 Winter Conference at a level appropriate to your budget. Each of these is described briefly here. Additional details are available upon request. Please use the enclosed exhibition reservation form (page 13) to indicate your participation. Furthermore, for exhibitors we shall provide assistance and meeting rooms for your user-group and/or sales meetings after the formal daily program ends. Corporate sponsors can provide tax-deductible gifts for a number of the items listed below (fortunately summarizing a character count will make it clear) or through a comprehensive agreement. These tax deductible Corporate sponsor levels are Silver for contributions between $1000 and $4999, Gold for $5000 to $9999, and Platinum for $10,000 or more. Silver, Gold, and Platinum sponsors will receive discounted rates.

(a) Purchase conference exhibition booth space:

Booth space in the exhibition is available for $1800 for each 8 x 10 foot booth, if the booth reservation form is received with prepayment or a purchase order payment before September 20, 2019 (page 13). Specific booth selection is provided on a first-come basis, and two complimentary exhibitor/Conference registrations (including Conference abstracts and tee shirt) will be offered for each 8 x 10-foot booth reserved. Discount Conference registration fees will be provided for all other company employees attending the meeting as described in the schedule of registration fees. Early registration for a block of employees provides considerable savings to Exhibitors. If your order is received after September 20 but before October 25, the space rate is $2400/booth. Orders for space received after October 9 will be charged at $3200/booth, if space is available. A special Early Bird Registration with discounts is available on page 12.

All furnishing, installation, electrical, and other services must be ordered from Inclusive Management Services (IMS). IMS will mail or make available on line a service kit containing all rental and order forms for each exhibitor.

(b) Sponsor daily refreshment breaks at short courses and/or during the meeting:

Two sponsored refreshment breaks and a "good morning" coffee service will be provided daily to registered conference attendees. Sponsors of these amenities will be acknowledged by a large sign at the break sites and in the Conference program. Breaks will occur in the Turquoise Ballroom exhibition or the Presidio Ballroom foyer. Sponsors will be acknowledged by large sign at the social hour and in the Conference program. Sponsor's literature also can be distributed.

(c) Sponsor an evening social reception:

A social mixer will be held each evening of the meeting, from 6:30 to 7:30 pm, except Thursday. Spouses, families, and participants gather to relax and socialize after a busy day. These mixers are the high point of the day, and they represent an excellent opportunity to make friends, renew acquaintances, and review the day's activities. This gives everyone a chance to unwind, enjoy the comfortable evening, and plan for dinner. Sponsors reach all participants and their spouses. Alcohol and non-alcohol punches, fruit juice, wines/beer, and finger snacks are served. Sponsors will be acknowledged by a large sign at the social hour and in the Conference program. Sponsor's literature also can be distributed.

(d) Sponsor Exhibition Grand Opening reception:

The exhibition will open on Monday evening, January 13, with a Grand Opening Reception in the Turquoise Ballroom and foyer from 6:30 to 8:30 pm. This event gives exhibitors an opportunity to show their products and meet participants after the first full day of the conference. This is the most popular reception of the meeting. Sponsors will be acknowledged by a large sign at the reception, on our website, and in the Conference program.

(e) Sponsor the Conference dinner:

A conference dinner will be held Thursday evening, January 16, beginning at 7 pm at the El Conquistador Tucson resort. Sponsors can contribute to (a) partial/total dinner costs to reduce the dinner fee paid by participants, (b) complimentary student and/or international visitor dinner tickets, (c) entertainment during dinner, or (d) an after-dinner speaker. Sponsors will be acknowledged by a large sign at the dinner, on the dinner menu, in the Conference program, and on our website. Donated door prizes have become a popular feature of the Winter Conference dinner. Poster prize winners (Monday - Thursday) will be announced during the dinner ceremonies.

(f) Advertise in the Conference program/abstract book:

A 400- to 500-page book is published for the Conference containing the program and all submitted abstracts for distribution to all participants. This publication will be available in electronic format as PDF files and distributed to participants on an USB flash drive. Full-page advertising space is available adjacent to the exhibitor's description or at the back of the book and on the outside back and inside covers. Since the Conference book has considerable post-Conference sales, an advertisement in it not only reaches those attending but also an extended, interested audience. An electronic copy of an previous conference abstract book is available.
(g) Advertise on the Conference website:
Installing your corporate logo and establishing a link to your website is available on our Conference website. The popularity of e-version advertising makes Corporate logos and banners effective in reaching the population who visit the Conference web page. The insertion rate is $650 per logo and link.

(h) Advertise in Conference e-mailings:
E-mail distribution of the conference announcement, preliminary and final program in electronic format is scheduled for 2019. Advertising can be included in this multi-page program PDF file. Registration can be included in this multi-page program. The insertion rate is $650 per page.

(i) Advertise on the Conference souvenirs:
The back side of the popular Conference tee shirt is available for one sponsor. The back side space is 6x4 inches and 2x2 inches for smaller items. We can also provide many other conference marketing items such as personalized neck drives, flash drives, and marketing materials, including brochures, flyers, product descriptions, catalogs, new product releases, seminars, and lecture materials, conference programs, presentations, audio, images, videos, and movies. The insertion rate is $1.5/kB. The ads can be electronically linked to your website. The rate is $15/kB.

(j) Sponsor travel for invited speakers, third-world country scientists, and/or students:
Twenty to 50 invited participants are funded by the Conference to present lectures, organize sessions, chair sessions, or present short courses. Sponsoring their travel can significantly extend our resources and reduce their travel burden. Some very desirable participants (especially Asians, Europeans, Latin Americans, and academics) have not been able to attend in the past owing to the lack of local travel funds. Similarly, outstanding graduate students currently working in plasma spectrochemistry will be given travel grants if sponsors can be found. Two to five students were sponsored during each of the past meetings. An investment in participant travel grants goes a long way in generating a positive relationship for the sponsor. Sponsors will be acknowledged in the program book and on the award certificate. These contributions are tax deductible.

(k) Sponsor a symposium:
We introduced the company-sponsored symposium in 1994. A sponsored topical symposium provides travel grant awards to invited speakers and symposium chairman, and will bear the name of the sponsor (i.e., The DEF Company Heritage Lecture). The inserted symposium will bear the name of the sponsor (i.e., The DEF Company Symposium on Plasma Chemistry). The symposium will be designed to attract participants who have made significant contributions to plasma spectrochemistry. These contributions will be acknowledged in the program book and on the award certificate. These contributions are tax deductible.

(l) Sponsor a Heritage Lecture:
A series of six lectures will be presented every afternoon from 5:30 to 6:00 pm by outstanding senior scientists, who have made significant contributions to plasma spectrochemistry. These Heritage Lectures are designed to inspire and assist young scientists in their research. The speakers will discuss their research philosophy, their scientific approach to problem solving, their academic motivations and career goals, and their future plans for the field. These contributions will be acknowledged in the program book and on the award certificate. These contributions are tax deductible.
Lessons Learnt
High Power or Low Power; Reflections on a Plasma Applied Spectra)
Detectors — Time Marches On. M. Bonner Denton
49 Years of Atomic Spectroscopy — From Nebulizers to
Kay Niemax, BAM (sponsor Applied Spectra)
Ablation,
Tools of the Trade — From Flow Injection to Laser
Freddy Adams, University of Antwerp (sponsor Spectron, Inc.)
Spectroscopic Imaging: A Spatial Odyssey
(sponsor Burgener Research; PerkinElmer)
Development
Observations on Commercial Analytical Instrumentation
Collins, CEM Corporation
Back to the Future, Barry L. Sharp, Loughborough University
(sponsor Spectron, Inc.)
Lasers at Work in Atomic Spectroscopy: A Long Flaming
and Sparking Combination of Diagnostic and Analytical
Aspects, Nicoló Omenetto, University of Florida (sponsor
Applied Spectra)
High Power or Low Power; Reflections on a Plasma
Spectrochemical Controversy and Some Professional
Lessons Learnt, Les Ebdon, University of Bedfordshire
(sponsor Burgener Research)
Make Big Plans - Aim High in Hope and Work, Michael J.
Collins, CEM Corporation
Observations on Commercial Analytical Instrumentation
Development, Andrew T. Zander, Torrance, California
(sponsor Burgener Research; PerkinElmer)
Spectroscopic Imaging: A Spatial Odyssey, Professor
Freddy Adams, University of Antwerp (sponsor Spectron, Inc.)
2016 Heritage Lectures
Tools of the Trade — From Flow Injection to Laser
Ablation, Cameron McLeod, University of Sheffield (sponsor
Burgener Research)
The Boundary Conditions for Scientific Research,
Kay Niemax, BAM (sponsor Applied Spectra)
49 Years of Atomic Spectroscopy — From Nebulizers to
Detectors — Time Marches On. M. Bonner Denton,
University of Arizona (sponsor Meinhard)
Innovative Research on Plasma Spectrochemical
Methods for Solving Analytical Problems. José Broekaert,
University of Hamburg
ICP-MS From the Eye of a Beholder Part II. R.S. Houk,
Iowa State University
2018 Heritage Lectures
Reflections on Decisions Made: Ultratrace Elemental
Analysis, Ralph Sturgeon, National Research Council of
Canada (sponsor Burgener Research)
Lifelong Learning, Norbert Jakubowski, BAM - Federal
Institute for Materials Research, and Testing Division
(sponsors SPETEC, BAM)
Science According to Calvin & Hobbes, David Koppenaal,
Pacific Northwest National Laboratory (sponsor Applied
Spectra)
An Academic Life Exploring the Increasing Complexity
of Matter with Atomic Spectrometry, Alfredo Sanz-Medel,
University of Oviedo
A Journey in the Life of a Practical Atomic Spectro-
scopist, Isaac (Joe) Brenner, Brenner Scientific
2020 Heritage Lectures
Olivier F.X. Donard, IPREM
Gary M. Hiefje, Indiana University
Michael Ketterer, Northern Arizona University
Rob McCrindle, Tshwane University
Richard E. Russo, Lawrence Berkeley National Laboratory
Scott D. Tanner, Canada

(m) Sponsor a professional development short course:
Preconference professional development short courses
are self-supporting, but increasing costs of audiovisual aids,
computer rental, and duplicating handouts minimize payments
to instructors and increase registration fees. A sponsored
short course can target a very specific product audience (e.g.,
micronebulizers, food safety, nanoparticles, ICP-MS, FFF).
Contributions can provide travel grant awards to instructors
and needy short course participants (students, third-world
chemists), cover audiovisual projectors and other rental costs,
provide duplicated handout costs, and offer coffee break re-
freshments. The course will bear the name of the sponsor
(i.e., The ABS Company Short Course on Plasma Chemis-
try) in all programs, and handout materials can include an
advertising insert. These contributions are tax deductible.

(n) Donate Conference gifts:
Conference gifts (e.g., pens, paper pads, bags, cases,
cup holders, laser pointers) carrying your company logo are
an effective means to reach participants. We seek bags for
the materials given to participants at registration, and we can
offer a variety of pads and cases with your imprinted com-
pany name and logo. Monthly appointment calendars and
planners, coffee mugs, baseball caps, and drink insulators
were a big hit previously.
Prizes for outstanding posters (e.g., digital cameras,
books, journal subscriptions) have been donated previously
and are awarded by sponsors to win-
ing poster authors selected by a
panel of distinguished colleagues.
These awards are documented in
post-conference reports in the Con-
ference proceedings. Contributions
are tax deductible. Conference dinner
door prizes also are solicited.
Submit technical papers describing research/development efforts:

To complement your presence at the Conference exhibition or your sponsorship of one of the Conference activities, an effective means to reach participants is to submit an original paper to the Conference program and a technical presentation at the Workshop on New Plasma Instrumentation. We discourage presentations describing well-known products or specific instrument details, since these points are effectively handled during the exhibition or the preconference Seminar program. We encourage discussion of new, novel developments, especially if they are unique and represent an initial public disclosure. The title and abstraction submission form is found on page 22.

Holding user-group meetings during the Winter Conference also is encouraged, and we shall provide meeting room space after the regular session for exhibitors. Scheduling these meetings should not conflict with any Conference activities, however, and Monday through Wednesday and Friday nights after 7 pm are available. Space for corporate sales meetings also can be arranged.

Exhibition Pricing Schedule

Advertising
(a) Program-Abstract Book, Flyers, Handouts, Website, or Mailings (per side/page) $650
Preferred Location (add) $325
(b) Gift Souvenir
   Tote Bags $4000
   Tee Shirts $4000
   Other Items (Coffee mugs, baseball caps, drink insulators, pens, toys, candies, etc.) $1500 and up

Conference Sponsorship
(a) Preconference Short Course $1700
(b) Technical Poster Session $3700
(c) Technical Symposium $6600
(d) General Meeting Sponsor $8500
(e) Heritage Lecture Sponsor $3750
(f) Corporate Sponsor $1000 and up
   Silver $1000-$4999
   Gold $5000-$9999
   Platinum $10,000+

Exhibition
(a) Exhibition Booth Space (1- 8' x 10') $1800 and up
(b) Corner Booth Location (8' x 10') $2000 and up

Meeting Breaks, Social Events
(a) Early Morning Coffee $1600 and up
(b) Daily Refreshment Break $4700
(c) Sunday Evening Reception $4900
(d) Evening Social Reception $6000
(e) Exhibition Grand Opening $8000
(f) Conference Dinner (El Conquistador Tucson) $9000

Conference Sponsorship
(g) Speaker Travel Grants (Invited speakers, overseas guests) $1500-$3000
(h) Student Travel Grants $1500
(i) Conference gift(s), Poster prizes Gratis You Supply
(j) Workshop on New Plasma Instrumentation Technical Paper Submission Fee $300
(k) Preconference Seminar Fee $600
(l) Golf Tournament Sponsor $2000

Silver $1000-$4999
Gold $5000-$9999
Platinum $10,000+

2020 Winter Conference on Plasma Spectrochemistry
January 12 – 18, 2020, Tucson, Arizona

wc2020@chem.umass.edu
http://icpinformation.org
http://www.hiltonelconquistador.com,
http://www.visitTucson.org
# 2020 Winter Conference Exhibition and Posters

**Tuesday, January 14 - Thursday, January 16, 2020**

**Turquoise Ballroom and Foyer**

<table>
<thead>
<tr>
<th>VIP Booth</th>
<th>47</th>
<th>46</th>
<th>45</th>
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**Conference Registration Desk**

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**Poster Area**

<table>
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<tr>
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**Exhibition**

<table>
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<tr>
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See page 25 for current booth assignments.
Exhibition and Poster Area
Turquoise Ballroom and Foyer
EXHIBITION OF SCIENTIFIC INSTRUMENTATION

RESERVATION FORM

DEADLINES: Early Bird, Reservation July 12, 2019

CONTACT PERSON: 
COMPANY NAME: 
COMPANY ADDRESS: 
TELEPHONE/FAX/E-MAIL: 

A. RESERVATION OF EXHIBITION SPACE [El Conquistador Turquoise Ballroom and Foyer] 
Amount
1. Standard booth (8 feet x 10 feet) [$1650 until July 12, 2019] 
   [number of booths] ________ @ $ ____________ + ☐ corner location $200 $________ 
2. Booth location preference (1) ________ (2) ________ (3) ________ (4) ________ [floor plan next page for layouts] 

B. SPONSORED COFFEE/REFRESHMENT BREAK 
1. Good Morning Coffee [January 13-18, indicate number of days] _____ @ $1600/day $________ 
2. Refreshment Breaks (2/day, January 13-18) [indicate number of days] _____ @ $4700/day $________ 
3. Refreshment Breaks (Short courses, January 10-13) [indicate number of days] _____ @ $1700/day $________ 
   [indicate day Saturday/Sunday/Monday and name of short course:________________________] 

C. SPONSORED SOCIAL MIXER/COCKTAIL HOUR 
1. Sunday Evening (January 13, 2020) Social Mixer @ $4900 $________ 
2. Evening Social Mixer, Jan 14 to 18, 2020 [indicate number of days and dates] _____ @ $6000/day $________ 
3. Exhibition Opening Reception, Monday, January 13, 2020 @ $8000 $________ 

D. SPONSORED WESTERN-STYLE CONFERENCE DINNER 
1. Thursday Evening (Jan 16, 2020) Conference Dinner (Hilton Last Territory Steakhouse)@ $9000 $________ 

E. CONFERENCE PROGRAM/ABSTRACT BOOK ADVERTISEMENT 
1. Describe advertising [number of pages, agency] ___________ @ $650/page $________ 
2. Advertising located on cover pages (supplement to above) @ $325 $________ 
3. Electronic advertising located on Flash Drive (supplement to Abstract book) @ $1.5/kB $________ 

F. SOUVENIR LOGO ADVERTISING 
1. Print Your Logo on Souvenir Tee Shirts or Tote Bags @ $4000 $________ 
2. Print Your Logo on Souvenir Items (Sun Visors, Caps, Aprons, etc.) @ $4000 $________ 

G. SPONSORED CONFEEER OR STUDENT TRAVEL GRANT 
1. Travel Grant to (specify __________________ or unrestricted) $________ 
2. Student Travel Grant @ $1500 $________ 

H. SPONSORED SYMPOSIUM IN YOUR COMPANY NAME 
1. Symposium selected [see program]: @ $6600 $________ 

I. GIFT DONATION TO CONFERENCE OPERATING EXPENSES 
1. The following conference gifts will be provided: ________________________________ 

J. REGISTRATION FEE for EXHIBITOR PERSONNEL in addition to complimentary 
1. Conference Registration Fee @ $125/person (until July 12, 2019) $________ 
2. Names of complimentary registrations (two per 8’ x 10’ booth, 10 maximum) [please complete a separate Conference Registration Form for each exhibitor]:__________________________ 

P.O. Number or Prepayment Required with this Order TOTAL $________ 

We, the undersigned, have read the contract, including terms and rules on the reverse, and will exhibit at the 2020 Winter Conference. Space assignment will be made based on assigned order number, size requested, etc. 

AUTHORIZED BY:____________________________________________________________ DATE:_________________________

%ICP Information Newsletter, Inc., 18241 Beauty Berry Court, Lehigh Acres, FL 33972-7525
Dr. Ramon Barnes, Conference Chairman, Telephone (239) 674-9430, Fax (239) 674-9431,
email wc2020@chem.umass.edu, http://icpinformation.org
## A. RESERVATION OF EXHIBITION SPACE [El Conquistador Turquoise Ballroom and Foyer]

<table>
<thead>
<tr>
<th>Amount</th>
<th>Number of Booths</th>
<th>Corner Location $200</th>
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<tbody>
<tr>
<td>$1800 until 9/20/19; $2400 until 10/25/19; $3200 after 10/25/19</td>
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**2. Booth location preference (1) (2) (3) (4) [floor plan page 10 for layouts]**

### B. SPONSORED COFFEE/REFRESHMENT BREAK

- **1. Good Morning Coffee [January 13-18, indicate number of days]**
  - [ ] @ $1600/day

- **2. Refreshment Breaks (2/day, January 13-18) [indicate number of days]**
  - [ ] @ $4700/day

- **3. Refreshment Breaks (Short courses, January 10-13) [indicate number of days]**
  - [ ] @ $1700/day

### C. SPONSORED SOCIAL MIXER/COCKTAIL HOUR

- **1. Sunday Evening (January 13, 2020) Social Mixer**
  - [ ] @ $4900

- **2. Evening Social Mixer, Jan 14 to 18, 2020 [indicate number of days and dates]**
  - [ ] @ $600/day

- **3. Exhibition Opening Reception, Monday, January 13, 2020**
  - [ ] @ $8000

### D. SPONSORED WESTERN-STYLE CONFERENCE DINNER

- **1. Thursday Evening (Jan 16, 2020) Conference Dinner (Hilton Last Territory Steakhouse)**
  - [ ] @ $9000

### E. CONFERENCE PROGRAM/ABSTRACT BOOK ADVERTISEMENT

- **1. Describe advertising [number of pages, agency]**
  - [ ] @ $650/page

- **2. Advertising located on cover pages (supplement to above)**
  - [ ] @ $325

- **3. Electronic advertising located on Flash Drive (supplement to Abstract book)**
  - [ ] @ $1.5/kB

### F. SOUVENIR LOGO ADVERTISING

- **1. Print Your Logo on Souvenir Tee Shirts or Tote Bags**
  - [ ] @ $4000

- **2. Print Your Logo on Souvenir Items (Sun Visors, Caps, Aprons, etc.)**
  - [ ] @ $4000

### G. SPONSORED CONFERENCE OR STUDENT TRAVEL Grant

- **1. Travel Grant to (specify or unrestricted)**
  - [ ]

- **2. Student Travel Grant**
  - [ ] @ $1500

### H. SPONSORED SYMPOSIUM IN YOUR COMPANY NAME

- **1. Symposium selected [see program]**
  - [ ] @ $6600

### I. GIFT DONATION TO CONFERENCE OPERATING EXPENSES

- **1. The following conference gifts will be provided:**

### J. REGISTRATION FEE for EXHIBITOR PERSONNEL in addition to complimentary

- **1. Conference Registration Fee @ $130/person (until 10/25/19), @ $425 (until 12/13/19), $730 (after)**
  - [ ]

- **2. Names of complimentary registrations (two per 8' x 10' booth, 10 maximum)**
  - [ ]

---

**P.O. Number or Prepayment Required with this Order**

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*We, the undersigned, have read the contract, including terms and rules on the reverse, and will exhibit at the 2020 Winter Conference. Space assignment will be made based on assigned order number, size requested, etc.*

**AUTHORIZED BY:**

[Signature]

**DATE:**

---

**20206 Winter Conference on Plasma Spectrochemistry**

%ICP Information Newsletter, Inc., 18241 Beauty Berry Court, Lehigh Acres, FL 33972-7525

Dr. Ramon Barnes, Conference Chairman, Telephone (239) 674-9430, Fax (239) 674-9431, email wc2020@chem.umass.edu, http://icpinformation.org
1. CONTRACT: This application, properly executed by applicant (Exhibitor) shall upon written acceptance constitute a valid and binding contract.

2. PURPOSE: To disseminate knowledge and promote the development and application of plasma spectrochemistry. The comprehensive technical exhibition will serve to introduce new products and services to the market and to educate individuals in these areas with regard to these technologies. Only exhibitors whose materials are related to those purposes will be allowed to maintain displays. Exhibit Management reserves the right to determine, in its sole discretion, whether Exhibitor’s materials relate to the purpose of the exhibition.

3. ASSIGNMENT OF SPACE: Space assignment will be based on Assignment Order Number, size of space required, the date the contract is received, and utility requirements. Assignment of space is final. Space assignments may be revoked or changed by Exhibit Management any time that the minimum payment schedule is not met.

4. SUBLETTING OF SPACE: Exhibitor agrees not to assign, sublet or apportion the whole or any part of the space allowed without the knowledge of and written consent of Exhibit Management.

5. SPACE RENTAL FEES: Booth stand (8’ x 10’ booth) includes standard drapery only, a sign showing Exhibitor’s name, and two technical registration fees (10 maximum). See reverse side for the fee structure and deadlines.

6. ARRANGEMENT OF EXHIBITS: Exhibitor agrees to arrange exhibits so as not to obstruct the general view nor to hide other exhibits. No display material exposing an unfinished surface to neighboring exhibits or aisles will be permitted. Booth height not to exceed eight feet.

7. ADVERTISING MATTER: Exhibit Management reserves the right to refuse to permit distribution of souvenirs, advertising matter or anything else which it may consider objectionable. Distribution elsewhere than from within an exhibitor’s booth is forbidden.

8. SAFETY PRECAUTION: Exhibitor agrees to take the necessary measures to safeguard visitors in the exhibit area from any hazards associated with exhibit equipment. Exhibitor agrees to comply with the following safety practices during the exhibit: Bureau of Radiological Health standard for laser products, American National Standards Institute (ANSI) standard Z-136.1 on safe use of lasers, American Conference on Governmental Industrial Hygienists (ACGIH) guide for control of laser hazards in the operation of all coherent sources during the show. Exhibitor is responsible for the safe disposal of toxic materials.

9. PAYMENT & CANCELLATION: Payment of 100% of the space rental fee is due with this application. The pre-reservation deadline is September 20, 2019. The space contract agreement may be canceled by Exhibitor by written notice to the address set forth in this contract. However in the case of cancellation, the following charges will be payable by Exhibitor. If cancellation notice is received by December 13, 2019, Exhibitor is liable for 50% of the space rental fee. After December 13, 2015, 100% of the fee is due. Additionally, in the event of cancellation, Exhibit Management shall have the right to use said space to suit its own convenience, including selling the space to another exhibitor, without any rebate or allowance to the defaulting exhibitor except as provided above.

10. OCCUPANCY OF EXHIBIT HALL: Exhibit Management may terminate this contract in the event the Exhibit Hall is destroyed or damaged, or if the exhibit fails to take place as scheduled, is interrupted, discontinued or access is prevented due to any of the following causes: strike, lockout, injunction, emergency, act of God, act of war or any other cause beyond control of the Exhibit Management.

In such an event, Exhibitor agrees to waive any and all damages and claims for damages and agrees that the sole liability of Exhibit Management and Sponsoring Association shall be to refund to Exhibitor all payments made for exhibit space, less proportionate share of all expenses incurred and committed by Exhibit Management and Sponsoring Association.

11. INSTALLATION AND DISMANTLING: Exhibitor agrees to install all exhibits by the opening hour of the exhibition. Exhibitor agrees not to dismantle any exhibit nor to do any packing before the final closing hour of the exhibition. Under no circumstances will the delivery or removal of any portion of an exhibit be permitted during the exhibition without permission from exhibit Management. All overtime costs for set-up or dismantling will be borne by Exhibitor.

12. REJECTIONS AND PENALTIES: Exhibit Management and Exhibit Hall will use reasonable care to protect Exhibitor against loss. However, they will not be liable to damage or loss to property of or injury to Exhibitor, his agents or employees, through theft, damage by fire, accident or other causes. Exhibitor should insure his property against such loss. Exhibitor agrees to make no claim against and to protect, indemnify and hold harmless Exhibit Management, Sponsoring Association, and Exhibit Hall against loss, theft or damage to Exhibitor’s property or for any injury to persons in Exhibitor’s area. In the event that Exhibit Management or Sponsoring Association shall be held liable resulting from Exhibitor’s act of failure to act, Exhibitor agrees to indemnify them and hold them harmless.

14. EXHIBIT MANAGEMENT: The words “Exhibit Management” and “Sponsoring Association” as used herein refer to the Winter Conference on Plasma Spectrochemistry and the ICP Information Newsletter, Inc.

Exhibitor further agrees that the conditions, rules and regulations of Exhibit Management are made a part of this contract and that said exhibitor agrees to bound by each and all of these rules and regulations, and agrees that Exhibit Management shall have full power to interpret, amend, and enforce all rules and regulations in the best interest of the show.

Return this contract and any correspondence to:
Dr. Ramon Barnes, Conference Chairman
Winter Conference, %ICP Information Newsletter, Inc., 18241 Beauty Berry Ct., Lehigh Acres, FL 33872; T (239) 674-9430, F (239) 674-9431, wc2020@chem.umass.edu.
**MEETING SPACE**
With over 100,000 sq ft of flexible indoor and outdoor meeting space, the El Conquistador will host the 2020 Winter Conference by offering two 12,000 sq ft ballrooms, one for the exhibition and one for the meeting, as well as spectacular outdoor venues with views of Pusch Ridge.

**EXECUTIVE CONFERENCE CENTER**
The 11,000 sq ft Executive Conference Center is an exceptional venue for satellite meetings with eight distinct meeting rooms, including a boardroom with a built-in 70" LED television.
MANUFACTURER'S SEMINAR PROGRAM FOR PLASMA INSTRUMENTATION

A four-hour seminar (training/education program or user's meeting) can be scheduled during the preconference program, Friday through Monday, January 10 - 13, 2020, by exhibitors and/or producers or distributors of plasma spectrochemical instrumentation, supplies, and related products. The application fee is $600. The conference will provide an appropriate room, training facilities (excluding computer projector), publicity, registration, program listing, and abstracts in the Conference announcements. The seminar content, schedule, and organization will be the responsibility of the presenters. Introductory or advanced customer training, product introduction and/or demonstrations, product line descriptions, or user's group meetings and discussions are appropriate subjects. These seminars will be presented in parallel to the fee-based short courses, and they will be scheduled to minimize conflicts with complementary short course topics or competitive seminars. This seminar program will be free to all registered Conference participants, although advanced registration will be encouraged. Choice of seminar time and date is on a first-come basis.

☐ I (we) wish to schedule a Manufacturer's Seminar

SEMINAR TITLE

PREFERRED DATE AND TIME (Indicate 1st, 2nd, 3rd Choices)

☐ (1) Friday, January 10, 2020  ☐ 8 am  ☐ 1 pm  ☐ 7 pm
☐ (2) Saturday, January 11, 2020  ☐ 8 am  ☐ 1 pm  ☐ 7 pm
☐ (3) Sunday, January 12, 2020  ☐ 8 am  ☐ 1 pm  ☐ 7 pm
☐ (4) Monday, January 13, 2020  ☐ 7 pm

DESCRIPTIVE ABSTRACT AND/OR PROGRAM (Use additional pages if needed)

ORGANIZER'S NAME(S) [give full names of contact organizer or manager]:

COMPLETE POSTAL AND E-MAIL ADDRESS(ES) [give full address of contact]:

Please complete, sign below, and return this form by September 20, 2020, to 2020 Winter Conference, Attention: Ramon Barnes, ICP Information Newsletter, 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525, or PO Box 666, Hadley, MA 01035-0666, fax (239) 674-9431, e-mail wc2020@chem.umass.edu

PAYMENT. Payment ($600) is required at the time of submitting your reservation.

AUTHORIZED BY

NAME ____________________________________ SIGNATURE ______________________ DATE ____________

COMPLETE MAILING ADDRESS (if not included above):

CONTACT TELEPHONE/FAX/EMAIL:

Received: Seminar Payment Registration 2020-_______ - ________
## CONFERENCE REGISTRATION FEE SUMMARY

<table>
<thead>
<tr>
<th>Conference Registration Fees</th>
<th>Before October 25, 2019</th>
<th>After December 13, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference*</td>
<td>$550</td>
<td>$850</td>
</tr>
<tr>
<td>Exhibitor**</td>
<td>$130</td>
<td>$425</td>
</tr>
<tr>
<td>Student***</td>
<td>$75</td>
<td>$130</td>
</tr>
<tr>
<td>Postdoctoral***</td>
<td>$100</td>
<td>$260</td>
</tr>
<tr>
<td>Single Day*** (2 days max) @ per day</td>
<td>$210/day</td>
<td>$365/day</td>
</tr>
<tr>
<td>Short Course Enrollment (each course)</td>
<td>$120</td>
<td>$240</td>
</tr>
<tr>
<td>Student Short Course Rate</td>
<td>$25</td>
<td>$30</td>
</tr>
<tr>
<td>Conference Dinner (includes taxes and gratuity), Thursday, January 16, 2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference Dinner (adult)</td>
<td>$65</td>
<td>$69</td>
</tr>
<tr>
<td>Conference Dinner (child under 12)</td>
<td>$32</td>
<td>$33</td>
</tr>
<tr>
<td>Additional or Duplicate, Shirt, Abstracts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Souvenir T Shirt (Size ___ )</td>
<td>$18</td>
<td>$20</td>
</tr>
<tr>
<td>Conference Abstracts (duplicate)</td>
<td>$24</td>
<td>$36</td>
</tr>
</tbody>
</table>

* Conference registration includes Conference abstracts, souvenirs and tee shirt, and one-year subscription to ICP Information Newsletter. Conference dinner is not included in the registration fee.

** Conference registration for personnel of organizations participating in Conference exhibition includes Conference abstracts and souvenir shirt only. Exhibitors must be registered as employees of an exhibiting firm. Conference dinner is not included in the Exhibitor registration fee.

*** Conference registration includes Conference abstracts and souvenir shirt only. Only full-time students are eligible for student registration. Enclose a letter signed by the academic advisor. No registration fees are charged for accompanying persons, family, or children.

**CANCELLATION POLICY:** Full refund available if written request postmarked before December 13, 2019; 50% refund if request postmarked no later than December 20, 2019. No refund for requests postmarked after December 20, except for medical reasons with doctor's verification.

New subscriptions to the ICP Information Newsletter for 2019 and 2020 are available at a special 10% discount [$60.30 (US, Canada), $82.80 (Europe, South America), $91.80 (Asia, Pacific, etc.)]. Tax-deductible contributions are solicited to our Conference Travel and Registration Grant funds for students and overseas visitors. Do not overlook your corporate gift matching programs.

Please send payment with Registration form to WINTER CONFERENCE, % Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 USA.

Federal Employer Identification Number (EIN) is 04-3361420.

American Express, MasterCard, or Visa may be employed to pay for your registration. Please enclose the following information with your registration form:

Paid by: □ Check or money order; □ American Express; □ Master Card; □ VISA

Cardholder's Name (as printed on card): ____________________________

Credit Card Account No. (All digits) : ____________________________ Expiration date ________ Security Code ________

Card Holder's Billing Address: __________________________________________

Cardholder Signature: __________________________________________ Date ________

2020 Winter Conference on Plasma Spectrochemistry, %ICP Information Newsletter, Inc., 18241 Beauty Berry Ct., Lehigh Acres, FL 33972-7525; P.O. Box 666, Hadley, MA 01035-0666 USA

Dr. Ramon Barnes, Conference Chairman, Telephone (239) 674-9430, Fax (239) 674-9431

email wc2020@chem.umass.edu, http://icpinformation.org
A. Registration

Please Type or Print Clearly

FAMILY NAME

COMPANY

ADDRESS

CITY

STATE

ZIP/POSTAL CODE

COUNTRY

E-MAIL

Telephone (Business) (Cell)

FAX

Please indicate:

☐ Author  ☐ Co-author  ☐ Attending (☐ Single day  ☐ Short Course Only)  ☐ Exhibitor  ☐ Student* (☐ Predoctoral  ☐ Postdoctoral)

*Only full-time students are eligible for student registration. Academic advisor must countersign registration.

Tee Shirt Size:

☐ Extra Extra Large  ☐ Extra Large  ☐ Large  ☐ Medium  ☐ Small  ☐ Lady's sizes

B. Accompanying Person(s), Transportation, Accommodations (Information purposes only)

Give names of accompanying person: Spouse or Children (Names/Ages)

Arrival Date/Time

Departure Date

Hotel:

☐ Hilton El Conquistador Tucson  ☐ Other

C. Conference Registration Fees

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>Enter Amount</th>
<th>Subtotal</th>
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<tbody>
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<td></td>
<td>$730</td>
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<tr>
<td>Student</td>
<td>$ 75</td>
<td>$130</td>
<td></td>
<td>$290</td>
</tr>
<tr>
<td>Postdoctoral</td>
<td>$100</td>
<td>$260</td>
<td></td>
<td>$480</td>
</tr>
<tr>
<td>Single Day ___ days (2 days max) @</td>
<td>$210</td>
<td>$365</td>
<td></td>
<td>$480 per day</td>
</tr>
</tbody>
</table>

D. Short Course Enrollment

(each)  $120 $240 $365 [indicate below]

☐ Student* Short Course  $25 $30 $50 [indicate below]

Mark Date, Time Fill-in Course Number (SX- 00) and Name

☐ (1) Jan 10, 1 pm S - ____________________________ $__________

☐ (2) Jan 10, 7 pm S - ____________________________ $__________

☐ (3) Jan 11, 8 am S - ____________________________ $__________

☐ (4) Jan 11, 1 pm S - ____________________________ $__________

☐ (5) Jan 11, 7 pm S - ____________________________ $__________

☐ (6) Jan 12, 8 am S - ____________________________ $__________

☐ (7) Jan 12, 1 pm S - ____________________________ $__________

☐ (8) Jan 12, 7 pm S - ____________________________ $__________

☐ (9) Jan 13, 7 pm S - ____________________________ $__________

☐ (10) Jan 18, 8 am S - ____________________________ $__________

☐ (11) Jan 18, 1 pm S - ____________________________ $__________

☐ (12) Jan ___ S - ____________________________ $__________

E. Conference Dinner (includes tax and gratuity)

<table>
<thead>
<tr>
<th></th>
<th>Number Ordered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Dinner (adult)</td>
<td>$65 $69 $73 (x_) $__________</td>
</tr>
<tr>
<td>Conference Dinner (child under 12)</td>
<td>$32 $33 $35 (x_) $__________</td>
</tr>
</tbody>
</table>

F. Duplicate/Additional Shirts, Abstracts, Donations

<table>
<thead>
<tr>
<th></th>
<th>Number Ordered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Souvenir T Shirt (Size ___)</td>
<td>$18 $20 $23 (x_) $__________</td>
</tr>
<tr>
<td>Conference Abstracts (duplicate)</td>
<td>$24 $36 $60 (x_) $__________</td>
</tr>
</tbody>
</table>

☐ Tax-Deductible Contribution to Conference Travel-Registration Funds $__________

TOTAL $__________

Please send payment with this Registration form to WINTER CONFERENCE, %Dr. Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525, or wc2020@chem.umass.edu.

Paid by:

☐ Check or money order  ☐ American Express  ☐ Master Card  ☐ VISA. Cardholder Name: __________________

Credit Card Account No._______________________________________ Expiration Date_______Security Code______

Card Holder's Billing Address _______________________________________________________________________

Signature: ___________________________ Date: ____________

For Conference Use Only

REGISTRATION NUMBER 2020-___|___|___ - ___|___|___

Payment: $ Check No. Date Received:

Refund: Check Date Acknowledgment:
A. Registration

FAMILY NAME FIRST NAME

COMPANY

CITY STATE ZIP/POSTAL CODE

COUNTRY E-MAIL FAX

Telephone (Business) (Mobil) 

Please indicate:

☐ Author ☐ Coauthor ☐ Attending (☐ Single day ☐ Short Course Only) ☐ Exhibitor ☐ Student* (☐ Predoctoral ☐ Postdoctoral)

*Only full-time students are eligible for student registration. Academic advisor must countersign registration.

Tee Shirt Size: ☐ Extra Extra Large ☐ Extra Large ☐ Large ☐ Medium ☐ Small ☐ Lady's Size.

B. Accompanying Person(s), Transportation, Accommodations

Give names of accompanying person: Spouse or Children (Names/Ages) Other

Arrival Date/Time Airline

Departure Date Hotel: ☐ Hilton El Conquistador Tucson ☐ Other

C. Conference Registration Fees

Only Before Enter Amount Subtotal

☐ Conference $510 $__________

☐ Exhibitor $125 $__________

☐ Student $ 70 $__________

☐ Postdoctoral $ 92 $__________

☐ Single Day ___ days (2 days max)@ $175 per day $__________ $_____

D. Short Course Enrollment (each) $100 [indicate below]

☐ Student* Short Course $25 [indicate below]

Mark Date, Time Indicate Course Number (SX - 00) and Name

☐ (1) Jan 10, 1 pm S____-

☐ (2) Jan 10, 7 pm S____-

☐ (3) Jan 11, 8 am S____-

☐ (4) Jan 11, 1 pm S____-

☐ (5) Jan 11, 7 pm S____-

☐ (6) Jan 12, 8 am S____-

☐ (7) Jan 12, 1 pm S____-

☐ (8) Jan 12, 7 pm S____-

☐ (9) Jan 13, 7 pm S____-

☐ (10) Jan 18, 8 am S____-

☐ (11) Jan 18, 1 pm S____-

☐ (12) Jan __, ___ pm S____-

E. Conference Dinner (includes tax and gratuity)

Number Ordered

☐ Conference Dinner (adult) $65 (x__) $__________

☐ Conference Dinner (child under 12)$32 (x__) $__________ $_____

F. Duplicate/Additional Shirts, Abstracts, Donations

Number Ordered

☐ Souvenir T Shirt (Size ___) $15 (x__) $__________

☐ Conference Abstracts (duplicate) $21 (x__) $__________

☐ Subscription to ICP Information Newsletter (January - December 2020) $__________ $_____

☐ Tax-Deductible Contribution to Conference Travel-Registration Grant Funds $__________ $_____

TOTAL $__________ $_____

Please send payment with this Registration form to WINTER CONFERENCE, %Dr. Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525, or wc2020@chem.umass.edu.

Paid by: ☐ Check or money order ☐ American Express ☐ MasterCard ☐ VISA. Cardholder Name: _________________________________

Credit Card Account No. __________________________________________ Expiration Date _______ Security Code _______

Card Holder's Billing Address ____________________________________________________________________________

Signature: __________________________________________ Date: __________________________

For Conference Use Only REGISTRATION NUMBER 2020-__|__|__| - __|__|__|

Payment: $ Check No. Date Received: ______________________

Refund: Check Date Acknowledgment: ______________________
HOTEL RESERVATION FORM

El Conquistador Tucson, a Hilton Resort
10000 North Oracle Road, Tucson, AZ 85704

PLEASE RETURN THIS FORM BY MAIL/FAX/EMAIL TO:
M&E Meeting Planners, %Steve Lepow, 18 Holbrook St, Palmer, MA 01069 USA
Telephone 860-885-4556, FAX 413-324-2990, E-mail memeetingplanners@gmail.com

ARRIVAL DATE________________(Month/Day/Year)_CHECKOUT DATE______________________

The El Conquistador Tucson Resort conference room rate is $139.00 per night (single, double occupancy) plus 14.55% tax ($20.22) for a total of $159.22. Triple room rates are $25 per night additional. (A rollaway bed is an additional $20 per night). Children under 18 years old stay free in their parent’s room as long as beds do not need to be added. Depending on availability room rates are guaranteed for reservations received by December 6, 2019.

CONFERENCE RATE CANNOT BE GUARANTEED FOR RESERVATIONS RECEIVED AFTER DECEMBER 6, 2019.

PLEASE PRINT CLEARLY AND COMPLETE ONE (1) RESERVATION FORM PER ROOM

ATTENDEE NAME:

COMPANY NAME:

ADDRESS:

CITY: STATE: ZIP/POSTAL: COUNTRY:

WORK PHONE: CELL:

FAX: EMAIL:

SHARING WITH:

KING BED OR 2 QUEENS?

SPECIAL ROOM NEEDS (HANIDCAPPED/OTHER):

TOTAL DEPOSIT AMOUNT*:

CREDIT CARD TYPE (VISA, MASTERCARD, AMERICAN EXPRESS, DISCOVER, DINERS):

CREDIT CARD NUMBER: EXPIRATION DATE:

NAME ON CREDIT CARD: SECURITY CODE:

CARD HOLDER’S BILLING ADDRESS:

CITY: STATE: ZIP/POSTAL: COUNTRY

SIGNATURE: DATE:

Reservations will not be processed without a signature. Guests must have a credit card available at check in. The credit card will not be charged by the hotel until the end of the stay. No charges will be processed in advance. Guests who fail to arrive on the scheduled arrival date will be considered “No-Shows”. Any reservation not cancelled 10 days before arrival date, as well as “No-Shows”, will be subject to a one-night room (and tax) cancellation fee. Reservation changes or cancellations must be submitted in writing (by email) to memeetingplanners@gmail.com, and they must be received ten (10) days before arrival. For airport shuttle from/to TUS and the hotel, please contact memeetingplanners@gmail.com.
El Conquistador Tucson, A Hilton Resort

Rates
The special conference room rate (single or double) is $139.00 plus room tax (14.55%). Additional charge for a third person in the same room is $25 per person, per night (plus tax), or a rollaway bed charge is $20 per night (plus tax). Children under 18 may stay for free in their parent’s room using existing bedding.
Conference guests are provided complimentary access to Elements Fitness Center (equivalent to $10 per person, per day).

Taxes and Service Charges
Currently, Resort rooms are taxed at a rate of 14.55%. All other resort purchases may be subject to sales tax. Please note that these taxes are subject to change under Arizona State tax laws.

Check-In/Out Time
The check-in time is 4:00 pm; check-out time is 11:00 am. All guests arriving before 4:00 pm will be accommodated as rooms become available. The Bell Staff can arrange to check baggage for those arriving early when rooms are unavailable and for guests attending functions on departure day.

Early Departure Fee
In the event a guest who has requested a room checks out before the guest’s reserved checkout date, the Hotel will add an early checkout fee of $50.00 to the guest’s individual account. Guests wishing to avoid an early checkout fee should advise the Hotel at or before check-in of any change in planned length of stay. The Hotel will inform attendees of this potential charge at check-in.

Gratuities (Optional)
The following gratuities are suggested and will be at the individual guest’s discretion:
* Porterage: $5.00 in and $5.00 out per person
* Maid Services: $5.00 per room per night

Resort Value Pack (Optional)
All of the following amenities and services are available at $10.00 per room, per night, plus applicable tax, and will be offered as an option to purchase by guests upon check in.
```
¨ Wellness Center Admittance ($10.00 value per day)
¨ Country Club Fitness Center Access ($10.00 value per day)
¨ 10% off Tennis/Golf Pro Shop merchandise purchase
¨ Half off Tennis Court Fee (Without value pack $20.00 per hour)
¨ Rent one demo racquet and get a second rental free ($4.50 value)
¨ $5.00 off overnight Valet parking (Without value pack $11.00 per night)
```

Resort Parking (Optional)
Self-parking is available without charge. Valet parking is available for a service fee.

Non-Stop Airline Destinations

Scotts/Tacoma
Portland
San Francisco
Las Vegas
Los Angeles
San Diego
Phoenix
Salt Lake City
Denver
Minneapolis/St. Paul
Chicago O’Hare
Chicago Midway
Atlanta
Dallas/Ft. Worth
Houston
TUCON

INTERNATIONAL AIRPORT
TUCON AIRPORT AUTHORITY
CONFERENCE PRESENTATION TITLE AND ABSTRACT SUBMISSION FORM

Submission Deadline: July 12, 2019

I (we) plan to submit a paper as a ☐ lecture (15 minutes), ☐ poster, ☐ computer poster, ☐ either.

TITLE

AUTHOR NAME(S) [give full names of all authors, underline presenting author]:

COMPLETE POSTAL AND E-MAIL ADDRESS(ES) [give full address of all authors]:

Please type a 50-word descriptive abstract, sign below, and return this form by July 12, 2019, to 2020 Winter Conference, Attention: R. Barnes, ICP Information Newsletter, 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 or PO Box 666, Hadley, MA 01035-0666; fax (239) 674-9431, e-mail wc2020@chem.umass.edu

CLASSIFICATION. Which of the following best describes your contribution?

A. Symposium:
☐ Sample introduction/transport phenomenon, ☐ Nanomaterial analysis, ☐ Elemental speciation,
☐ Chromatography and plasma detectors, ☐ Automation, plasma instrumentation, detector systems, ☐ Artificial intelligence, chemometrics, software, ☐ On-line and remote analysis, ☐ Sample preparation, treatment, ☐ Spectroscopic standards and reference materials, ☐ Excitation mechanisms and plasma phenomena, ☐ Laser-assisted plasma spectrochemistry, laser ablation, laser-induced breakdown spectroscopy, ☐ Glow discharge, ☐ Imaging mass spectroscopy, mass cytometry, ☐ Plasma source mass spectrometry, ☐ Stable isotope analysis, forensics, ☐ Quality assurance

B. Application:

PUBLICATION. Which of the following best describes your intentions for publication of the proposed paper?
☐ submission to Conference proceeding journal:
☐ Journal of Analytical Atomic Spectrometry.
☐ submission to ICP Information Newsletter. ☐ submission to another journal. ☐ no plan to submit manuscript.

CERTIFICATION.
I (we) certify that the material to be presented represents original research or development, which at the time of the Conference will previously not have been published or presented in public.

SIGNATURE _____________________________________________ DATE _________________

COMPLETE MAILING ADDRESS (if not included above):

TELEPHONE/FAX/EMAIL:

-----------------------------------------------------------------
Preliminary titles and abstracts (50 words) are solicited on original plasma spectrochemical research, methods and applications. A submission form is available on page 22. The title and abstract submission deadline is July 12, 2019. Accepted titles will be acknowledged in August and assigned program times, and final abstracts will be due October 25, 2019. An abstract processing fee ($50) will be waived for on-time submissions, and a post-deadline processing fee penalty will be added for late submissions. Symposium topics include the following, and papers covering other plasma-related topics are encouraged:

**Symposia on Trace Elements, Stable Isotope, and Elemental Speciation Analyses**
- Biological Imaging, Metallomics, and Speciation Analyses
- Certified Reference Materials, Quality Control, Metrology
- Chemicals, Pure Reagents, Ultrapure Water
- Clinical Biomonitoring, Imaging, and Mass Cytometry
- Earth, Marine, and Geological Sciences
- Environmental, Agricultural, and Food Sciences
- Fundamental Processes, Basic Studies
- Petroleum Materials, Products, and Organic Solvents
- Pharmaceutical, Supplements, Nutraceutical Analysis
- Plasma Instrumentation, Sample Preparation
- Provenance, Authentication, Source Origin, Forensics
- Radioisotopes and Nuclear Materials Analyses
- Semiconductor Materials Analyses
- Solids, Surfaces, Interfaces, and Nanomaterials

**Symposium Topics**
- Elemental speciation and speciation sample preparation
- Excitation mechanisms and plasma phenomena
- Flow injection and fractionation spectrochemical analysis
- Glow discharge atomic and mass spectrometry
- Inductively coupled plasma atomic and mass spectrometry
- Laser ablation and induced breakdown spectrometry
- Microwave atomic and mass spectrometry
- Micronebulization systems, microplasma systems
- Plasma chromatographic detectors, combined systems
- Plasma instrumentation, automation, detectors, spectrometers, and software innovations
- Sample introduction, transport phenomena, and modeling
- Sample preparation, treatment, and automation; high-purity materials, and quality assurance
- Spectrochemical chemometrics, and expert systems
- Spectroscopic standards, reference materials, and databases
- Stable isotope analyses and applications

Abstracts and titles for the Workshop on New Plasma Instrumentation (Tuesday, January 14) from manufactures and vendors also will be accepted with the same guidelines as conference presentations. A $300 registration fee is required for Workshop speakers.
Winter Conference Award in Plasma Spectrochemistry

The 2020 Winter Conference Award in Plasma Spectrochemistry, sponsored by Thermo Fisher Scientific, recognizes achievements in conceptualization and development of novel instrumentation as well as the elucidation of fundamental events or processes involved in plasma spectrochemistry. The Award also acknowledges the authorship of significant research papers or books that have had an influential role in new advancements as well as outstanding applications that open new fields of use for plasma spectrochemistry.

At the 2020 Winter Conference two awards will be presented to scientists who have made noteworthy contributions to the field of plasma spectrochemistry as judged by an international selection committee. One award is for a senior scientist, and the second award will be for a young scientist, who will be no older than 45 years at the time the award is announced. Thermo Fisher Scientific invites scientists worldwide to submit their applications for these awards. For information and details, visit www.thermoscientific.com/wpcaward. Documentation can be submitted to wpc.award@thermofisher.com.

Thermo Fisher Scientific will present the awards at the 2020 Winter Conference. In addition to having his/her contributions to the field recognized by the scientific community and the industry, the selected scientists will also receive a $5000 prize, a certificate, and trophy during the award ceremony.

The first award was presented during the 2010 Winter Conference. Awards have included R. Sam Houk and Jorge Pisonero (2018), Nicoló Omenetto and Steven Ray (2016), Gary M. Hieftje (2014), J. Sabine Becker (2012), and Ramon M. Barnes (2010).
Exhibitor Insurance

As a standard requirement of all show exhibitors, providing proof of general liability coverage from an insurance company in good standing with minimum policy limits of $1,000,000 per occurrence and $2,000,000 over all is necessary. If exhibitors do not have this coverage, the 2020 Winter Conference has made arrangements for exhibitors to acquire the coverage at significant savings by purchasing as part of a group. To obtain this coverage for $65 plus tax follow the link below, and complete a short questionnaire. https://www.TotalEventInsurance.com/app/Customer/ExhibitorAnnual.aspx?eid=Fjfk5bprJqQ$

Proof of alternative coverage, satisfying these minimums, also will be accepted before the scheduled move-in.

2020 Winter Conference Exhibition
Tuesday, January 14 - Thursday, January 16, 2020
Exhibitor Booth Location

<table>
<thead>
<tr>
<th>Booth</th>
<th>Exhibitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Agilent Technoloies</td>
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<td>Agilent Technoloies</td>
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