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ASTEE

March 2019

ASTEE Newsletter

Table of Contents

Message from the President	1	Dues	9
ASTEE at a Glance	4	Important Dates	9
Challenge Coin	6	May We Introduce You To...	10
News You Can Use	8	2019 AAFS Meeting ASTEE Reception	12

Message from the President

Happy Anniversary! This year marks ASTEE's 10 year anniversary as an organization, and I couldn't be more excited to celebrate our accomplishments with you. ASTEE could not have made such progress without the hard work of our founders (read all about how ASTEE began on the website's History Tab), generous support of our sponsors, and remarkable interest and response from ASTEE members. It is with sincere appreciation that the Board of Directors has sought ways to celebrate and mark our anniversary.



As you are probably aware, ASTEE recently released a challenge coin. They have quite the appeal as the first 100 were sold in a month! Many thanks to Katie White for submitting the winning design and to Michelle Drake for taking the lead on this project and making it happen. These will be available for purchase on our website and at ASTEE receptions throughout the year. So if you missed seeing them at the AAFS Reception in Baltimore, you can see them next at the joint SAFS/ASTEE meeting at the end of April.

After the SAFS/ASTEE joint meeting's highly anticipated statistics and knot workshops (thank you Education Committee for organizing), I hope you can attend the ASTEE reception planned for May 1st. There we will be hosting a drawing to celebrate and give back to our members. Winners are not required to be present, however, it may be your only opportunity to see some of the awesome door prizes in-person. For example, when else might you be able to see a book authored and signed by Edmond Locard!?! As you pay your dues this year (reminder, March 31st is the deadline for dues payment without an additional late fee), your name and member number will be added to a bowl. Winners

Message from the President continued...

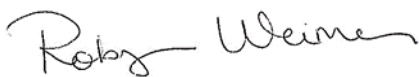
will be chosen at random from this bowl during the drawing at the reception. Prizes will be shipped to any members not in attendance. We have gotten some incredible donations from members and sponsors with prizes including art, books, microscopist's tools, and ASTEE swag. I hope you are able to join in the celebration! We also hope to release a new ASTEE shirt this year and present a new award; the design and plans are still underway.

Giving back to our membership is important to me as all of ASTEE's work and accomplishments are made possible only with your help. You take the time to read our emails, answer our surveys, and contribute where you can (JASTEE, our newsletters, Trace 101, Trainings, etc.). All of our committees are 100% staffed with volunteers. Some of these committee members have spent many years devoted to ASTEE tasks and are ready to step down and allow for new contributors and voices. With their vacated seats, we have several opportunities for members to get involved.

Years ago, I read messages from former ASTEE presidents like Chris Taylor, Andy Bowen, and Jeff Dake who strongly encouraged professional involvement. They convinced me! I took their advice and can share from personal experience that they are right. Like them, I found that volunteering and engaging has opened new doors for career development, expanded my professional contacts, and increased personal friendships. I can't guarantee a job promotion, but I can promise you will work with passionate people (one of the trace evidence communities' many strengths) and gain the satisfaction of contributing to the advancement of trace evidence examiners around the world. Hopefully I have carried the torch convincingly. If you would like to become more involved, please reach out to me to discuss committee participation opportunities.

Lastly, I just want to give thanks as we reflect on the last 10 years of progress. Fellow ASTEE members, thank you for remaining so dedicated and passionate about what we do. Through ASTEE we will continue to strive to improve, both professionally and as an organization. To our sponsors, you make it possible to offer trainings, awards, and receptions to our members and help us fulfill our mission. To outgoing Board members, Kelly Brinsko Beckert and Michelle Drake, you set wonderful examples and leave difficult shoes to fill. To current Board and Committee members, you are incredible and it is a pleasure to work with you! As much as ASTEE has grown in the last 10 years, just think where it will be in 2029!

Wishing you all luck in the upcoming drawing,



Robyn Weimer
robyn.weimer@dfs.virginia.gov
2019 ASTEE President

2019 SAFS/ASTEE Joint Meeting

The 2019 SAFS/ASTEE Joint Meeting is being held at the Crowne Plaza Resort in Asheville, North Carolina from April 29th to May 3rd. Please see the link below for more information about registration and the meeting schedule. <https://safsannualmeeting.com/>

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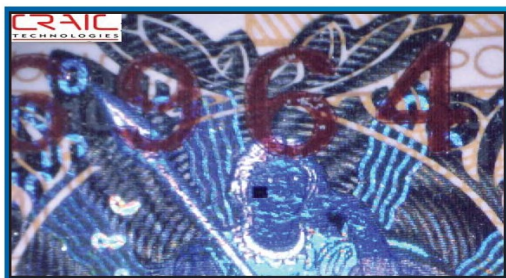
Fluorescence imaging of a nylon fiber with CRAIC's unique calibrated variable aperture.



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Glass Evidence

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Explosives

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Drugs

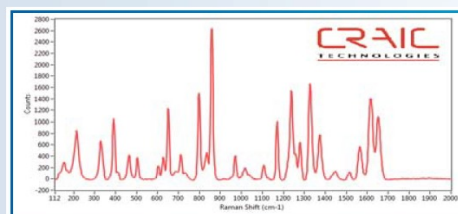
CRAIC Apollo™ Raman, UV and fluorescence microspectroscopy can be used for accurate identification of drugs of abuse.

DNA and Biological Evidence

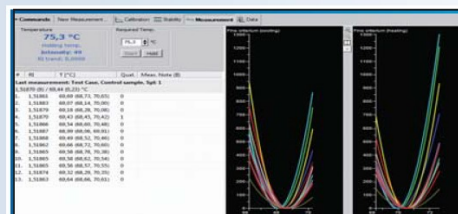
CRAIC UV microscopes can be used to identify usage of WMD materials from tissue samples. UV microscopy can also locate trace amounts of DNA and biological evidence.

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ASTEE at a Glance – Committee Updates

Awards Committee

ASTEE is offering two travel awards (\$500 each) to the joint SAFS/ASTEE meeting in Asheville, NC, April 29-May 3, 2019 for presenters to assist with expenses. In order to be considered for these travel awards, please send an essay of a maximum of 1000 words detailing why they should be given this award, membership number, and details regarding the oral or poster presentation they will be giving at the meeting to Darrel Hall (darrel.hall@state.or.us). The applicant must be a member in good standing and traveling more than 50 miles. The deadline for submission is March 30, 2019.

ASTEE will also offer one travel award (\$500) to the Inter/Micro Conference in 2019 in Chicago, IL, June 10-14, 2019. Details will be announced by email.

The deadline for the Scholarship Award has been extended until April 1st. This award is for Graduate students in the field of Forensic Science who plan on pursuing work in the Trace Evidence field. The Scholarship provides \$500 and a 2 year membership in ASTEE. Applicants must be currently enrolled in a Forensic Science or related science program and must submit an application form, an essay detailing the applicant's goals in the Trace Evidence field, official transcripts and a letter of recommendation from a professor in the applicant's graduate program. Email applications to darrel.hall@state.or.us.

Upcoming awards deadlines: The Edmond Locard Award for Excellence in Trace Evidence on June 1, 2019, and the Research Grant Award on August 1, 2019. See the website for additional details.

Bylaws/Administrative Rules Committee

The Board of Directors has asked us to look into updating our Code of Conduct. The committee is in the informational gathering stages with the goal of putting it out to the membership this fall. If an ASTEE member is part of a different organization with a code they think would be relevant to our group or has ideas for what the code should include, please have them email Celeste Grove at CGrover@osp.oregon.gov for consideration by the committee. We already have examples from NWAFS, AAFS, and ABC.

Communications Committee

If you are interested in becoming more involved in ASTEE, please consider joining the Communications Committee! We are currently looking for volunteers to help manage the ASTEE gmail account and resolve questions from ASTEE's membership. If you are interested, please contact Daniel Mabel at asteeTrace@gmail.com.

Also, the build-out of the new ASTEE website is well under way. It will have a brand new design and will feature a number of new functions, including a searchable contact information database, a discussion forum, an option for annual recurring dues payment, and web-based new member, membership upgrade, and award applications. More to follow in the coming months.

ASTEE at a Glance – Committee Updates continued...

Education Committee

The Education Committee has organized several exciting workshops, including wood analysis and forensic lamp filament analysis, for the upcoming SAFS/ASTEE conference April 29-May 3, 2019. We hope to see you there!

There is potential for a Soil Analysis workshop to be held at Penn State in late summer. Be on the lookout for the 2019 ASTEE survey which will have a question to gauge interest in this opportunity.

If you or your laboratory are interested in hosting potential workshops, you have ideas for potential webinars, or you have contact information for someone who may be able to offer a workshop or webinar, please send an e-mail address to our NEW e-mail address: astee.edu.committee@gmail.com.

Elections Committee

The election committee is looking for 1-2 members. The commitment is July to October and is typically 2-5 hours total. The job consists of finding and vet potential candidates who want to run for the ASTEE board. It would be helpful if the person was active member in the trace community. Please contact Katherine (Katie) Igowsky at katherine.igowsky@state.mn.us if interested.

Events Committee

The Events Committee is busy planning the ASTEE reception to be held during the SAFS/ASTEE joint meeting in Ashville, North Carolina. The reception will be held on Wednesday, May 1st from 8-10pm! Be on the lookout for an ASTEE email with more information about location.

Research Committee

The Research Committee would like to announce that Dana Greely, who had a primary role in the creation of the committee, and was its intrepid chair since its inception in 2015, has decided to step down as chair. However, she remains on as a committee member, and will lend her guidance as we move forward. This comes at a good time for former ASTEE president, Kelly Brinsko Beckert, as she is excited to continue contributing to ASTEE as your new Research Committee chair!

One of the roles of the Research Committee is to help pair graduate or undergraduate students interested in conducting research projects with forensic science practitioners. The forensic scientist can guide the student in choosing a project that will be relevant to the field, and provide assistance as needed in the research design, execution, and interpretation of results. One current student – scientist pairing involves ASTEE past president Andy Bowen and a student from George Mason University. Andy is officially the primary research advisor for the student's project in forensic geology. He reports that things are progressing well, and the student is on track to complete their work in the spring.

If you are interested in assisting a student or a forensic scientist trainee with a research project, or you know a student who is looking to perform practical research, or if you have a specific research need you like fulfilled, please don't hesitate to reach out to asteeresearch@gmail.com. More information about the Research Committee is available on the ASTEE website under the "Resources" tab: http://www.asteetrace.org/WebPages.cfm?action=viewCat&BIZ_UNL_id=49203

ASTEE at a Glance – Committee Updates continued...

Audit Committee

The Audit Committee has completed ASTEE's 2016 Financial Audit, and a summary is provided below. Based on member response in the recent ASTEE member survey, the detailed audit report will be posted to the ASTEE website in the member portal. The 2017 and 2018 audits are in progress and will be completed shortly. Future audits are expected to be more timely once financial documents are migrated and electronically available to the committee on the new ASTEE website.

In 2016, ASTEE sponsored three networking events held in conjunction with AAFS, MAAFS, and Inter/Micro meetings. In addition, one Scholarship Award, one Travel Award (to the MAAFS-ASTEE joint meeting), one Research Award, and one Professional Development Award were bestowed to four deserving recipients. These costs are partially offset by membership dues and our 2016 sponsors: CRAIC, EDAX, Foster & Freeman, JEOL, Leica, and McCrone Research Institute.

	2013	2014	2015	2016
IN	\$15,564.15	\$11,984.93	\$16,626.64	\$14,003.44
OUT	\$14,605.02	\$15,456.33	\$11,103.14	\$7,433.75

Since 2016, some changes have been instituted that should make future audits and ASTEE business easier. For example, a single point of contact was made responsible for contacting sponsors for advertisements, however, there continues to be room for improvement. The newly formed Sponsorship committee will hopefully make this a more streamlined front and ensure all needs are met in these important relationships.

As a result of this audit, ASTEE financial records (i.e., bank statements, deposit slips, audit documentation) will now be made electronic and preserved. These preserved records would facilitate members' ability to inspect all the books and records of the Society, per ASTEE Bylaws 3.1.3. Further, the Audit committee's report and a listing of incoming and outgoing expenses will now be included on the website's member's only section.

ASTEE Challenge Coin

ASTEE is excited to announce that our new challenge coin is now available for purchase! We have sold our first 100 coins and are in the process of ordering more! The coins cost \$7.50 apiece, which includes shipping, and can be purchased with a credit card or through a PayPal account. Click <http://www.asteeTrace.org/> to place your order. Once your order has been received, we will work quickly to get your coin(s) to you as soon as we can!



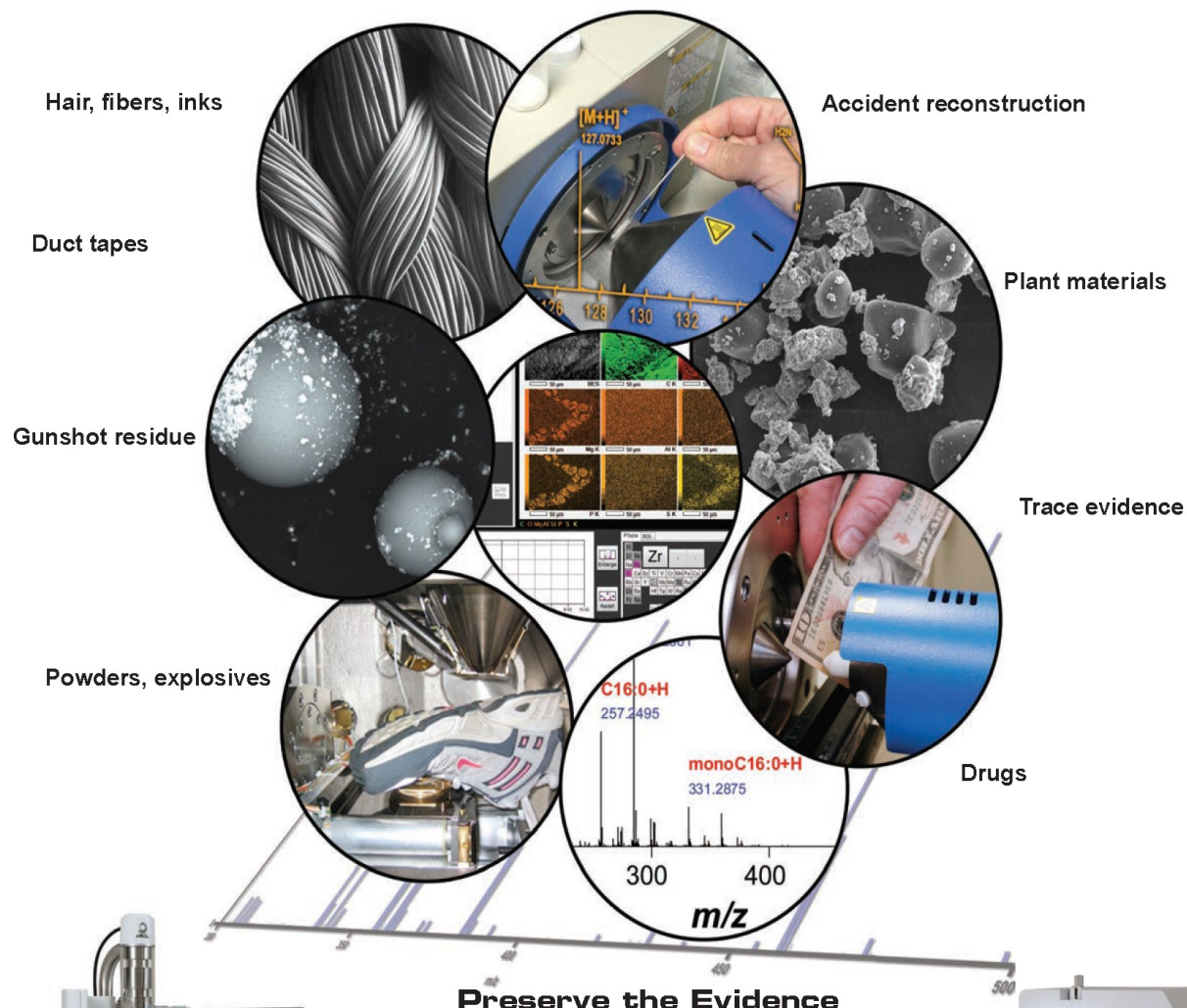


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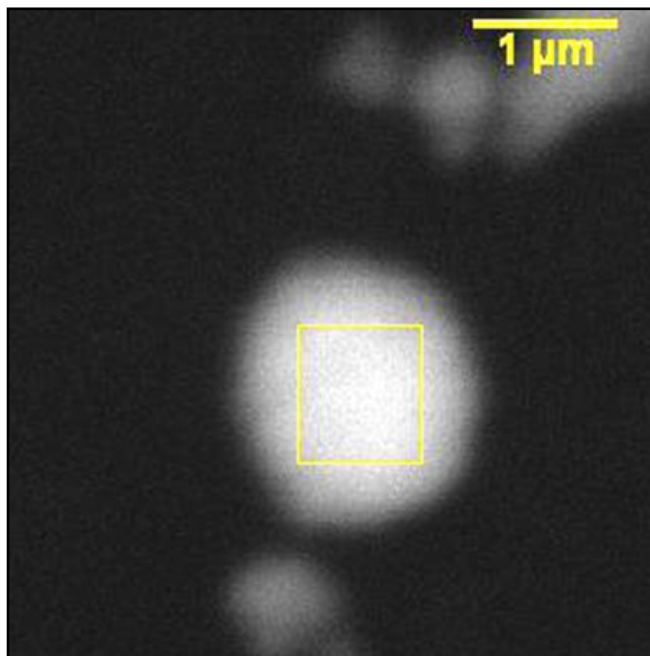
News You Can Use

Sr-only particles in Airbag Residue

By Mary Keehan, Virginia Department of Forensic Science

Previous research by Robert Berk on particles produced during airbag deployment has found airbags that produce lead (Pb), barium (Ba), and antimony (Sb) particles as well as airbags that produce strontium (Sr) particles with traces of potassium (K), chlorine (Cl), and aluminum (Al).

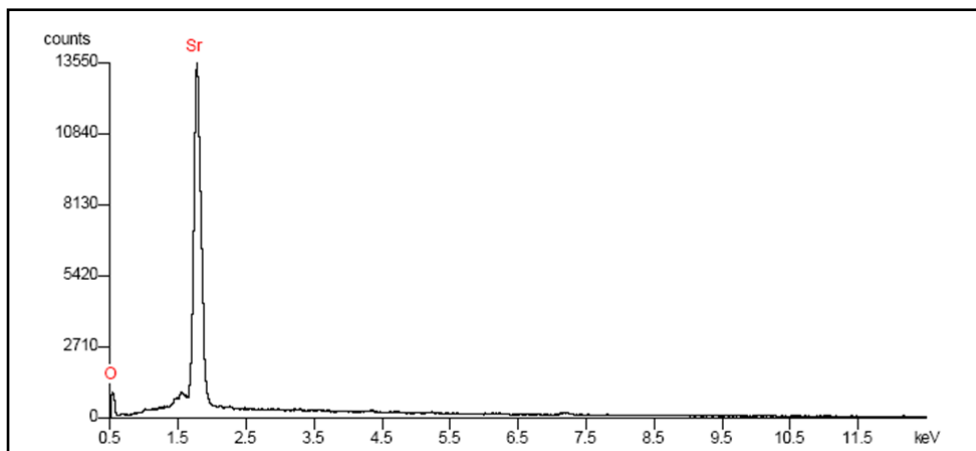
[1] This same research gave information on additional elements or particles that might also be present in a sample from an airbag. These additional elements and particles are helpful when attempting to determine if particles originated from the discharge of a weapon or from an airbag deployment. The Sr particles that Berk reported finding in airbags included trace amounts of K, Cl, and Al. Particles with Sr only and with Sr and Al or Sr, Al, and Cl can be found in primer residue from certain lead-free ammunition without the presence of K. [2,3] For this reason, the presence of K in Sr particles can be conservatively used as a reason to exclude particles during a primer residue exam.



As a part of ongoing research, samples from deployed passenger side airbags and air curtains were collected from vehicles at an auto salvage yard. Collection was carried out using a standard primer residue collection stub consisting of a piece of double-sided carbon tape affixed to an aluminum stub inside a plastic cap and vial. These samples were analyzed for particles similar to primer residue using a scanning electron microscope with energy dispersive X-ray system (SEM-EDS).

The most interesting result was for a 2009 Pontiac Vibe. This sample contained thousands of Sr particles with no Al, K, Cl, or iron (Fe). (See picture and spectra) The particles did appear to contain a small amount of Ni but this was later determined to be a system peak. The particles had spherical and molten morphologies and the sample itself contained almost no other type of particle.

Examination of the surrounding particle population offered no information that could help in identifying the Sr particles as being from an airbag. These particles could be classified as “consistent” if encountered in casework.



News You Can Use continued...

The presence of Sr only particles in airbags supports the designation of Sr particles as “consistent” based upon ASTM 1588. The designation of consistent means that there can be environmental sources for these particles. Often, the presence of Cl or K, a high number of accompanying zinc (Zn) particles, or a non-spherical appearance can be of help in differentiating between particles from lead free ammunition and those from an airbag. [1] In this case, none of those indicators were present. This serves as a reminder to use caution when interpreting results in cases where only single component consistent particles are present. Comparison with cartridge case scrapings should be performed whenever possible.

- [1] Berk, R. January 2009. Automated SEM/EDS Analysis of Airbag Residue. 1. Particle Identification. J. Forensic Sci. 54(1): 60-68.
 [2] Oommen, Z., Pierce, S. May 2006. Lead-Free Primer Residues: A Qualitative Characterization of Winchester WinClean, Remington/UMC LeadLess, Federal BallistiClean, and Speer Lawman CleanFire Handgun Ammunition. J. Forensic Sci. 51(3): 509-519.
 [3] Harris, A. January 1995. Analysis of Primer Residue from CCI Blazer Lead Free Ammunition by Scanning Electron Microscopy/Energy Dispersive X-Ray. J. Forensic Sci. 40(1): 27-30.

2019 Dues

The New Year is here, which means it's time to start thinking about dues! If submitted before March 31st, dues are \$25.00; after March 31st, they are \$30.00. We offer three methods by which to submit your payment:

- 1) Mail a check to the address on the dues form;
- 2) 2) Send a payment via PayPal to the ASTEE account at asteetrace@gmail.com (having a PayPal account of your own is necessary for this option), or;
- 3) 3) Use the PayPal button found in the Membership section of our website, www.asteetrace.org, which allows you to use a credit card (it is not necessary to have a PayPal account of your own for this option).

Please complete a dues form (page 13) if your member information has changed and you have not yet notified us. Forms can be emailed or faxed to ASTEE Treasurer Chad Schennum at chad.schennum@dfs.virginia.gov or 804-786-6305.

2019 Important Dates

March 22	Call for papers due for SAFS/ASTEE joint meeting
March 30	Deadline for ASTEE Travel Awards to SAFS/ASTEE joint meeting
March 31	ASTEE Dues due
April 1	Deadline for ASTEE Scholarship Award
April 29 - May 3	SAFS/ASTEE joint meeting
May 1	ASTEE Reception from 8-10pm – more information on location to come
June 1	Deadline for The Edmond Locard Award for Excellence in Trace Evidence
June 10 - 14	Inter/Micro - more information regarding ASTEE reception to come
July 9 - 12	OSAC Meeting for Chemistry Scientific Area Committee

May We Introduce You To...

May We Introduce You To... Tracy Adams

Occupation: Criminalist for the Missouri State Highway Patrol Crime Laboratory

What Trace Evidence sub-discipline(s) are the focus of your work? Fire debris analysis, hair and fiber comparisons, gunshot residue analysis, and substance identification.

What is your favorite quote? *"Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as silent witness against him. Not even his fingerprints or his footprints, but his hair, the fibers from his clothes, the glass he breaks, the tool marks he leaves, the paint he scratches, the blood or semen he deposits or collects—all of these bear mute witness against him. This is evidence that does not forget. It is not confused by the excitement of the moment. It is not absent because human witnesses are. It is factual evidence. Physical evidence cannot be wrong; it cannot perjure itself; it cannot be wholly absent—only its interpretation can err. Only human failure to find it, study and understand it, can diminish its value."* (Harris v. United States, 331 US 145, 1947)



Who has been a mentor to you and how have they helped you? My mentor is Will Randle. He's an amazing criminalist and supervisor with a wealth of knowledge and the same amount of patience. I came to work as a criminalist after working as a bench chemist for 9 years and having no forensics experience. With Will's guidance, I have learned more than I could have imagined in the 5 years since joining the section and really enjoy working in trace evidence.

What do you like to do in your down time? In my down time, I like to spend time with my family (husband and children in photograph), listen to podcasts and audiobooks, and watch true crime shows (Investigation Discovery junkie!).

May We Introduce You To... Clark Smith

Occupation: Forensic Scientist – Trace/Chemistry Unit of the Denver Crime Laboratory

What Trace Evidence sub-discipline(s) are the focus of your work? Gunshot Primer Residue testing, Paint, Glass, Explosives, Controlled Substances

What is your favorite quote? "...wisdom excelleth folly as light excelleth darkness." Ecclesiastes 2:13

Who has been a mentor to you and how have they helped you? Mool Verma and Robert Burroughs – Trace Analysts at the Denver Crime Laboratory and former ASTEE members who have recently retired. These two forensic scientists have instilled in me a love for trace evidence analysis and a genuine curiosity about the world of materials and how they can be compared and how they may be transferred. Other mentors would include the many great instructors at the McCrone Research Institute like Skip Palenik and Gary Laughlin. Those folks have really inspired me, through the use of the light microscope, to find ways to enhance our lab's ability to do forensic case work. I have been fortunate over the course of my career to take many classes from them.



What do you like to do in your down time? In my down time I like to play tennis and billiards. I also love taking college courses of all sorts, in topics ranging from history to the psychology of sports.

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- *Indoor Air Quality*
- *Crystal Characterization*

Complete course descriptions, course calendar, and secure online registration are available at www.mccroneinstitute.org.



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2019 AAFS Meeting ASTEE Reception





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Katherine Igowsky

Executive Secretary

ASTEE Dues Form

Dear ASTEE member,

Please remit the sum of \$25.00 to ASTEE in payment of your membership dues for the 2019 calendar year by March 31, 2019. Please add a \$5.00 late fee for payment received after March 31, 2019. U.S. members remit checks and non-U.S. members remit International Money Orders payable to ASTEE.

Please send your payment to :

Chad Schennum—ASTEE Treasurer
Virginia Department of Forensic Science
700 North 5th Street
Richmond, Virginia 23219

If you prefer to use our online option, you can pay through the **asteetrace@gmail.com** account on PayPal or via the PayPal button in the Membership section of our website **www.asteetrace.org**.

If any of your contact information has changed, please complete the following and submit this form to Chad Schennum, either by mail with your payment, by email to the address at the bottom of the page, or by fax to 804-786-6305 once your payment is submitted.

Name _____

Membership # _____

Employer _____

Address _____

Phone # _____

Email _____

If you have any inquires concerning your membership dues, please contact Chad Schennum at chad.schennum@dfs.virginia.gov or 804-588-4105.



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