May/Dec 2019 • No. 251

ESA Newsletter

Electrostatics Society of America - The Friendly Society

President's Message

It is with great pleasure that I write my first letter as President of the Electrostatics Society of America. This past July, Shesha Jayaram (University of Waterloo) handed me the reins after serving as President since 2015. I have had the pleasure of serving on the Executive Council with Shesha during her entire tenure as President, and she has been a great leader and steward for the Society. Please join me in thanking her for her outstanding service. But she's not going far!

As was approved at our last Annual Meeting in Rochester, NY, Shesha will remain on the Executive Council along with Poupak Mehrani (University of Ottawa) and joined by Mike Arnold (Callaghan Innovation). Maciej Noras (University of North Carolina, Charlotte) is continuing as Vice President and Awards Chair, where he has done an outstanding job since 2015. Perhaps the best part about my new role is the opportunity to work with and learn from this outstanding leadership team, and I'm excited to work with them to continue to ensure that The Friendly Society thrives over the next two years.

But that's not all, there have been more changes among the ESA Officers. For what seems like an eternity, Steve Cooper (Mystic Tan, Inc.) has served as both Treasurer and Secretary. I am delighted to announce that Monayem Mazumder (Saginaw Valley State University) has agreed to help Steve out by serving as Secretary. Along with Mark Zaretsky (Eastman Kodak) as Newsletter Editor and Keith Forward (Cal Poly Pomona) as Webmaster, we have a great group of ESA Officers as well.

This leads me to our last change, which is that Rajeswari 'Raji' Sundararajan (Purdue University) is moving on from the Executive Council. Raji has been a stalwart of the ESA for the entire time I've been a member, serving as President from 2008-2011 and then as a member of the Executive Council from 2011-2019. After a decade of service and commitment, Raji deserves a well-earned break. That doesn't mean Raji is going anywhere - we will certainly still see her at our Annual Meetings, and I look forward to asking her for guidance and wisdom too!

Speaking of Annual Meetings, we just completed another successful one at the Rochester Riverside Hotel in Rochester, NY. Kelly Robinson (Electrostatic Answers), Bill Vosteen (Monroe Electronics), N. K. Kishore (Indian Institute of Technology, Kharagpur), and Mark Zaretsky (Eastman Kodak) all worked together to put it on, and I would like to thank them again for their efforts. Sadly, I was unable to attend because of a prior commitment overseas, but I've heard it was a great meeting once again!

Looking forward, I hope to continue to grow the ESA, drawing new researchers and practitioners active in electrostatics into the fold and cultivating the supportive community that makes us The Friendly Society. The field continues to grow and diversify because, as Shesha said in her final President's message, "Electrostatics exists Everywhere"!

2020 brings a great opportunity for this growth as we prepare for our 50th anniversary at the Semi-Centennial Joint Conference on Electrostatics, which will be held June 7-20, 2020 in Charlottetown on the beautiful Prince Edward Island in Canada. We are celebrating this remarkable occasion with our friends from the Institute of Electrostatics Japan, la Société Française d'Electrostatique, the Electrostatic Processes Committee of the IAS/IEEE, and the Electrostatic Committee of the Chinese Physical Society. Kaz Adamiak

(cont'd on p. 2)

President's Message (cont'd.)

(University of Western Ontario) and Hak-Joon Kim (Korea Institute of Machinery and Materials) are hard at work putting together what will be a seminal meeting in the history of the ESA. The Call for Papers is live and abstract submission opens January 1, 2020. Please join us and enjoy celebrating the history and looking forward to the future of electrostatics! Learn more at:

http://www.electrostatics.org/annualmeeting.html

Cheers,

David Go, University of Notre Dame (*dgo@nd.edu*)

President, Electrostatics Society of America

ESA Officers

President:

David Go, Univ. of Notre Dame

Vice President and Awards Chair:

Maciej Noras, Univ. of North Carolina

Executive Council:

Mike Arnold, Callaghan Innovation

Shesha Jayaram, Univ. of Waterloo

Poupak Mehrani, Univ. of Ottawa

Calendar

- 2020 Semi-Centennial Joint Conf on Electrostatics, June 7-10, 2020, Charlottetown, Prince Edward Island, CA, General Chair: Kaz Adamiak, *kadamiak@eng.uwo.ca*, Tech. Program Char: Hak-Joon Kim, *diayolk@kimm.re.kr,* Website: *https://www.electrostatics.org*, (Abstract: Feb 28, 2020)
- 2020 Elec Insul Conf, (EIC), Jun 7-11, 2020, Knoxville, TN, USA, Tech Program Chairs: Joe Williams III, *joe.w@electrolock.com*, Alan Sbravati, *alan_sbravati@cargill.com,* Website: *http://ieee-eic.org/*
- 12th Conf. of the French Electrostatics Society, Aug. 26-28, 2020, Gif-sur-Yvetter, France, Email: *sfe2020@geeps.centralesupelec.fr*, (Title & Abstract: March 31, 2020)

Current Events

Magnetic graphene switches between insulator and conductor

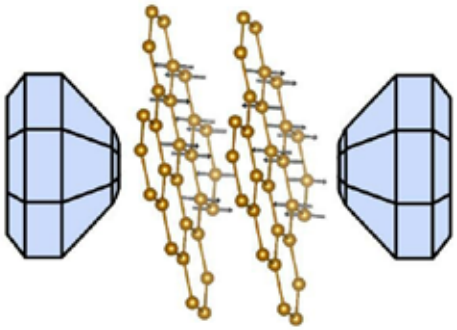
Sarah Collins, Univ. of Cambridge

Researchers have found that certain ultra-thin magnetic materials can switch from insulator to conductor under high pressure, a phenomenon that could be used in the development of next-generation electronics and memory storage devices.

The international team of researchers, led by the University of Cambridge, say that their results, reported in the journal Physical Review Letters, will aid in understanding the dynamic relationship between the electronic and structural properties of the material, sometimes referred to as magnetic graphene, and may represent a new way to produce two-dimensional materials.

Magnetic graphene, or iron trithiohypophosphate (FePS3), is from a family of materials known as van der Waals materials, and was first synthesised in the 1960s. In the past decade however, researchers have started looking at FePS3 with fresh eyes. Similar to graphene, a two-dimensional form of carbon, FePS3 can be exfoliated into ultra-thin layers. Unlike graphene however, FePS3 is magnetic.

The expression for electrons' intrinsic source of magnetism is known as spin. Spin makes electrons behave a bit like tiny bar magnets and point a certain way. Magnetism from the arrangement of electron spins is used in most memory devices, and is important for developing new technologies such as spintronics, which could transform the way in which computers process information.



Credit: University of Cambridge

2020 Semi-Centennial Joint Conference on Electrostatics

Charlottetown, Prince Edward Island, Canada

June 7-10, 2020

Year 2020 will mark the 50th anniversary of the founding of the Electrostatics Society of America (ESA). In order to celebrate this remarkable occasion, the ESA, the Institute of Electrostatics Japan, la Société Française d'Electrostatique, the Electrostatic Processes Committee of the IAS/IEEE and the Electrostatic Committee of the Chinese Physical Society jointly organize the Semi-Centennial Conference on Electrostatics. Contributions are invited ranging from fundamental physics and new developments in electrostatics to applications in industry, atmospheric and space sciences, medicine, energy and other fields.

Anticipated Technical Session Topics

• Atmospheric and space applications • Biological and medical applications • Breakdown, gas discharges and plasmas • Charge motion and static dissipation • Contact charging and triboelectric effects • Dielectrics and insulators	• Electrohydrodynamics • Electrostatic processes • Measurements and instrumentation • Microelectromechanical devices (MEMS) • Particle control and charging • Safety and hazards

Conference information, registration and abstract submission: http://www.electrostatics.org

Student presentations

A substantially reduced conference fee will be offered to all student participants. Presentations by graduate and undergraduate students are eligible for the Student Presentation Competition.

Important Dates

January 1, 2020	Abstract submission open
February 28, 2020	Abstract submission deadline
March 13, 2020	Notification of abstract acceptance
April 27, 2020	Early registration deadline
May 10, 2020	Final manuscript deadline
June 7, 2020	Conference starts

General Chair: Kazimierz Adamiak, Univ. of Western Ontario, kadamiak@eng.uwo.ca
Program Chair: Hak-Joon Kim, Korea Institute of Machinery and Materials, diayolk@kimm.re.kr

Venue: Charlottetown Inn & Conference Centre https://www.charlottetowninn.com/.
Charlottetown is the capital of Prince Edward Island – smallest of Canada's 10 provinces. Located in the Gulf of St. Lawrence, it is about 140 miles (225 km) long and 2 to 40 miles (3 to 65 km) wide. The 8 mile (12.9 km) long Confederation Bridge, the world's longest, connects the island to the neighbouring province of New Brunswick. The island is marked by red-sand beaches, lighthouses, fertile farmland, and is renowned for seafood.

ESA Awards - Call for Nominations

Dear Friends,

The ESA is accepting nominations for the following awards:

The ESA Distinguished Service Award recognizes outstanding service to the ESA over an extended period of time, with a demonstrated long-term commitment to the growth and continued well-being of the Society (requirement: 10 years as ESA member).

The ESA Lifetime Achievement Award recognizes outstanding contributions to the field of Electrostatics, as shown by the pervasiveness of the contributions in understanding certain problems or important practical benefits resulting from the work (requirement: 10 years working in field of Electrostatics).

The ESA Honorary Life Member Award recognizes exceptional contributions to both the ESA and to the field of Electrostatics, sustained over much of a career (requirements: 10 years as ESA member, 20 years working in field of Electrostatics).

The ESA Rising Star Award recognizes significant contributions at an early stage of a career to the field of Electrostatics, Requirements: age of 40 or younger, but cannot be a student).

The ESA Entrepreneur Award recognizes companies and/or individuals that implement electrostatics- related technologies and are recognized as having a meaningful impact in the industry and/or academia.

The Teacher of the Year Award recognizes outstanding teachers who use Electrostatics to stimulate learning, inspire students, or otherwise encourage and energize the learning process in a formal educational setting in grades K-12 (requirement: 3 years teaching Electrostatics).

The Student of the Year Award recognizes middle or high school students who demonstrate outstanding achievement in Electrostatics, as showcased in laboratory projects, papers or presentations.

The ESA is also accepting nominations for induction to the Electrostatic Hall of Fame. This honor recognizes and records for posterity those individuals who have made extraordinary contributions to the field of Electrostatics. Nominees do not need to be still living. The Hall of Fame has three categories: (1) advancement of the fundamental knowledge of Electrostatics; (2) promotion of interest in the field of Electrostatics; (3) innovations using Electrostatics technology in industry.

The list of the award recipients is available at *http://electrostatics.org/esaawardwinners.html.* Nominations should be submitted electronically to the ESA Award Chair, Prof. Maciej Noras at *mnoras@uncc.edu*, by April 30, 2020. The nomination should be in the form of a letter from an ESA member that includes a description of how the accomplishments of the nominee satisfy the award requirements (including citations of publications or patents when relevant), the contact information of the nominator and nominee, and the names and contact information of 3 other ESA members who endorse the nomination. For the Teacher and Student awards, endorsements from two faculty members of the nominee's institution should substitute for the ESA member endorsements.

Thank you in advance for all the submissions,

Sincerely,
Maciej Noras

Current Events (cont'd.)

Despite graphene's extraordinary strength and conductivity, the fact that it is not magnetic limits its application in areas such as magnetic storage and spintronics, and so researchers have been searching for magnetic materials which could be incorporated with graphene-based devices.

For their study, the Cambridge researchers squashed layers of FePS3 together under high pressure (about 10 Gigapascals), they found that it switched between an insulator and conductor, a phenomenon known as a Mott transition. The conductivity could also be tuned by changing the pressure.

These materials are characterised by weak mechanical forces between the planes of their crystal structure. Under pressure, the planes are pressed together, gradually and controllable pushing the system from three to two dimensions, and from insulator to metal.

The researchers also found that even in two dimensions, the material retained its magnetism. "Magnetism in two dimensions is almost against the laws of physics due to the destabilising effect of fluctuations, but in this material, it seems to be true," said Dr. Sebastian Haines from Cambridge's Department of Earth Sciences and Department of Physics, and the paper's first author.

The materials are inexpensive, non-toxic and easy to synthesise, and with further research, could be incorporated into graphene-based devices.

"We are continuing to study these materials in order to build a solid theoretical understanding of their properties," said Haines. "This understanding will eventually underpin the engineering of devices, but we need good experimental clues in order to give the theory a good starting point. Our work points to an exciting direction for producing two-dimensional materials with tuneable and conjoined electrical, magnetic and electronic properties.".

(from *https://phys.org/news/2019-02-magnetic-graphene-insulator-conductor.html*)

Graphene crinkles can be used as 'molecular zippers'

Kevin Stacey, Brown University

A decade ago, scientists noticed something very strange happening when buckyballs—soccer ball shaped carbon molecules—were dumped onto a certain type of multilayer graphene, a flat carbon nanomaterial. Rather than rolling around randomly like marbles on a hardwood floor, the buckyballs spontaneously assembled into single-file chains that stretched across the graphene surface.

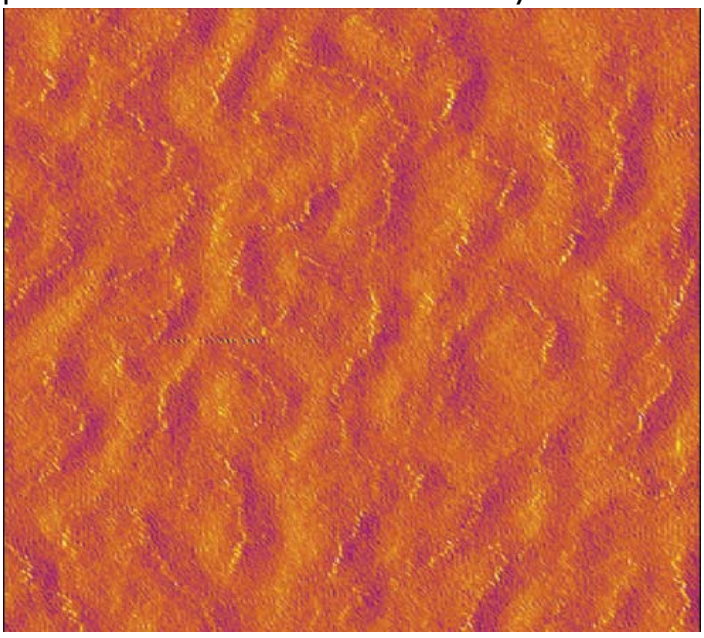
Now, researchers from Brown University's School of Engineering have explained how the phenomenon works, and that explanation could pave the way for a new type of controlled molecular self-assembly. In a paper published in Proceedings of the Royal Society A, the Brown team shows that tiny, electrically charged crinkles in graphene sheets can interact with molecules on the surface, arranging those molecules in electric fields along the paths of the crinkles.

"What we show is that crinkles can be used to create 'molecular zippers' that can hold molecules onto a graphene surface in linear arrays," said Kyung-Suk Kim, director of the Center for Advanced Materials Research in Brown's Institute for Molecular and Nanoscale Innovation and the study's senior author. "This linear arrangement is something that people in physics and chemistry really want because it makes molecules much easier to manipulate and study."

The new paper is a follow-up to earlier research by Kim's team. In that first paper, they described how gently squeezing sheets of layered graphene from the side causes it to deform in a peculiar way. Rather than forming gently sloping wrinkles like you might find in a rug that's been scrunched against a wall, the compressed graphene forms pointy saw-tooth crinkles across the surface. They form, Kim's research showed, because the arrangement of electrons in the graphene lattice causes the curvature of a wrinkle to localize along a sharp line. The crinkles are also electrically polarized, with crinkle peaks carrying a strong negative charge and valleys carrying a positive charge.

Kim and his team thought the electrical charges along the crinkles might explain the strange behavior of the buckyballs, partly because the type of multilayer graphene used in the original buckyball experiments was HOPG, a type of graphene that naturally forms crinkles when it's produced. But the team needed to show definitely that the charge created by the crinkles could interact with external molecules on the graphene's surface. That's what the researchers were able to do in this new paper.

Their analysis using density functional theory, a quantum mechanical model of how electrons are arranged in a material, predicted that positively charged crinkle valleys should create an electrical polarization in the otherwise electrically neutral



Microscope view of tiny buckyballs lined up on a layered graphene surface. New research shows that that electrically charged crinkles in the graphene surface are responsible for the strange phenomenon. Credit: Kim Lab / Brown University

buckyballs. That polarization should cause buckyballs to line up, each in the same orientation relative to each other and spaced around two nanometers apart.

Those theoretical predictions match closely the results of the original buckyball experiments as well as repeat experiments newly reported by Kim and his team. The close agreement between theory and experiment helps confirm that graphene crinkles can indeed be used to direct molecular self-assembly, not only with buckyballs but potentially with other molecules as well.

Kim says that this molecular zippering capability could have many potential applications, particularly in studying biomolecules like DNA and RNA. For example, if DNA molecules can be stretched out linearly, it could be sequenced more quickly and easily. Kim and his team are currently working to see if this is possible.

"There's a lot of potential here to take advantage of crinkling and the interesting electrical properties they produce," Kim said.

(from *https://phys.org/news/2019-01-graphene-crinkles-molecular-zippers.html*)

Fast, flexible ionic transistors for bioelectronic devices

HFSP Cross-Disciplinary Fellow George Spyropoulos and colleagues

We designed and developed novel transistor architecture and material to build better bioelectronic devices. For the first time, we were able to make a transistor that can communicate using ions, the body's charge carriers, at speeds fast enough to perform complex computations required for neurophysiology.

Key features required for safe, efficient, and prolonged use of transistors in biological environments include: i) they should be made out of materials that are biocompatible and stable; ii) they should be soft and flexible to not cause tissue damage and discomfort; iii) they should allow high speed and amplification to detect potentially low-amplitude ionic signals of the body; iv) they should be able to be addressed independently and made in high resolution.

We developed a transistor that can incorporate all of these features together.

In this work, we designed our transistor channel based on conducting polymers to enable ionic modulation and to make the device fast we modified the material to have its own mobile ions. This way the distance ions are required to travel is shortened to within the polymer structure. This improved the speed of the transistor by an order of magnitude compared to other ionic devices with the same size. Importantly, we only used completely biocompatible material to create this device. Our secret ingredient is sugar! Sugar molecules help the transistor channel to stay hydrated and make the travelling of the ions easier and faster.

Our results

- We created a transistor that is made out of fully biocompatible materials.

- It can interact with both ions and electrons, making communication with neural signals of the body more efficient.

- We can use these transistors in combination to perform computations – like logic gates.

- We used our transistor to record human brain waves (EEG) from the surface of the scalp. The transistor was easy to apply to the scalp and did not cause any irritation. It was much smaller than

Figure: IGT-based NAND and NOR gates conform to the surface of orchid petals (left). Scale bar, 1cm. Optical micrographs of NOR (upper right) and NAND (lower right) logic gates. Input (I1, I2) and output (O) configuration is indicated. Scale bar, 100 μm.

Current Events (cont'd.)

any other EEG electrodes, making it possible to fit between human hairs, improving the application process and the signals that can be recorded.

We made soft and conformable devices for recording neural signals – this could significantly improve the ease and tolerability of EEG procedures for patients.

These devices could also be used to make implantable closed loop devices, such as those currently used to treat some forms of medically refractory epilepsy; devices could be smaller and easier to implant, and also provide more information.

On the physical level, we are very excited that we could substantially improve ionic transistors by adding simple ingredients. With such speed and amplification, combined with their ease of microfabrication, these transistors could be applicable to many different types of devices. We are excited also about the potential to use these devices to benefit patient care in the future.

(from *https://www.hfsp.org/hfsp-news-events/fast-flexible-ionic-transistors-bioelectronic-devices*)

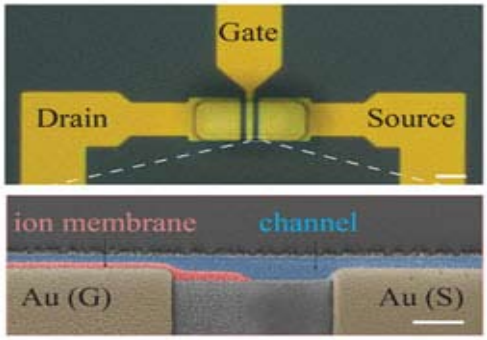


Figure 1: Optical micrograph displaying the top view of an individual transistor. Scale bar, 20 µm. Inset shows a cross-section scanning electron microscopy image acquired at a tilt angle of 30°. Ion membrane (light red), channel (light blue) and Au contacts for gate (G) and source (S; beige) are visible. Scale bar, 5 µm.

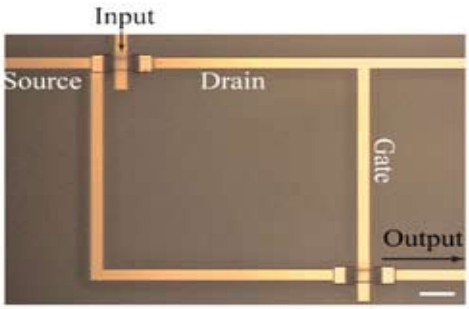


Figure 2: Optical micrograph displaying the top view of an IGT-based cascaded amplifier. Scale bar, 20 µm.

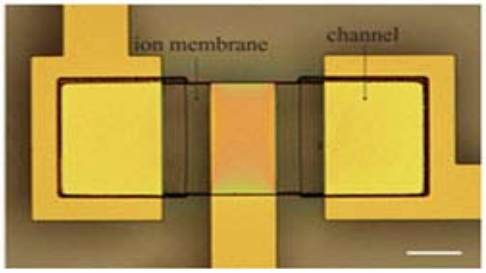


Figure 3: Optical micrograph displaying the top view of an IGT with L = 60 µm and W = 50 µm. Scale bar, 20µm.

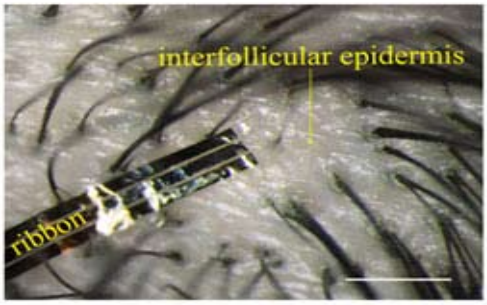


Figure 4: Optical micrograph of µ-EEG IGT conforming to human scalp; devices were designed to fit the interfollicular epidermis. Scale bar 2 mm.

A.D. Moore Retrospective

A.D. Moore and the early days of the Electrostatics Society of America (ESA)

G.S. Peter Castle, Charter Member

In continuing the story of the early days of the ESA as told by AD, in this issue we address the origin of the well-known motto, "The Friendly Society". In establishing this brand new organization in 1970, AD was adamant that it should be unique in offering members something different from more well established technical societies. He felt that many such organizations had become too large and impersonal. Although he was anxious to grow ESA, he did not want it to become so large that it lost its character. And what was it that defined this character? He thought long and hard about this and initiated discussions throughout the first two years of our existence. Attached below are two more of the early Newsletters. In Number 2 he sent out a "trial balloon" suggesting "Electrostatics-The Beneficial Science".

Through feedback and discussion this led in Newsletter 10, Sept 2, 1972 to the first formal reference to "The Friendly Society", the one that has characterized ESA to this day. Also of note in this Newsletter is the short report from Emery Miller. Dr. Miller, a pioneer in electrostatic painting with the Ransburg Corporation in Indianapolis, was almost as influential in setting up the ESA as AD. They became very close friends and worked on the project together. He served for many years in a number of important offices, including being our first Secretary-Treasurer and second President. He organized several of the annual conferences and never missed attending a meeting until he was no longer able. He died in 2002 at the age of 94.

A.D. Moore Retrospective (cont'd.)

This Newsletter hints at two other early issues, tax free status and the possibility of establishing a Journal for the Society, a story to be told in the next installment of this series.

Number Two ESA NEWS LETTER February 9 1971

A News Letter or journal is the glue that holds a society together between main events, such as conventions. This second issue would have been out long since, were it not for the fact that seven days a week on electrostatics interests have proved to be too few for me.

I have not even had time to get out national notices of the existence of ESA through journals, and so, we have grown only by contacts and correspondence. But we grow. Membership now stands at 64. From beyond our borders, we have Professors Ion Inculet, Peter Castle, and Julio V. Iribarne, Canada; Professor N. J. Felici, Grenoble; Dr. Senichi Masuda and Dr. Marumo, Japan. (Reminder: dues of $15.00 per year not yet paid may be mailed directly to our Treasurer, Dr. Duncan C. Blanchard, Earth Science Bldg., SUNYA, Albany, N. Y. 12203.)

The Albany Conference on Electrostatics will be held June 8-11, 1971. National notices of it are due to appear about now, so it also has had the word spread only by contacts and correspondence. Even so, the "might attend" returns now number 74, representing a very wide variety of research interests, applications, firms, and so on. Allowing for some not coming, but adding in other individuals and groups, there is reason to expect 100 as a minimum; and it could go much beyond that. If you are attending and have not yet sent me an "intention", please do so soon.

We will hold our first ESA Convention in connection with the Conference on the morning of June 11: a business session. I have prepared a number of items to submit first to the Interim Executive Council which, if approved, will be up for action at the Convention. Steps must be taken to move the ESA from its simpler "founded status,", to an organized and operational form.

Beyond question, various groups and societies will continue to hold specialized conferences and symposia on dielectrics, atmospheric phenomena, and various other areas. But only the ESA will have the continuing responsibility of initiating electrostatics conferences of general scope. The Albany Conference will have a successor. Should it be two years later, and what character should it have?

Finally, let me state two facts about electrostatics.
1) Its applications are of wide benefit to mankind, through pollution control and otherwise.
2) With any hazards under complete control - as they are - electrostatics is a clean servant: it presents no threat to man or the environment.

Might we not adopt a slogan, such as: -

ELECTROSTATICS- THE BENEFICIAL SCIENCE

Cordially yours,

A. D. Moore

A. D. Moore, President

ESA, THE FRIENDLY SOCIETY. We are a friendly society. Friendliness struck its roots back in the Adirondack Conference on Electrostatics. In the completely relaxed atmosphere at Whiteface Mountain, we 25 or so quickly established such ties that the mealtimes were a solid hub-bub of talk. More roots developed at the Albany Conference of around 140, when many a lasting friendship developed. A lot of the most cherished friendships of my own long life sprang from these electrostatics gatherings, and the rich contacts developed with ESA members. This will continue, for we can never become large, and aloof.

We can look with confidence to our 1973 Conference at The University of Western Ontario, where our hosts, Canadians, are among the friendliest people on earth. I know Canadians, having summered here in Canada since 1929, where these lines are written. Having very close ties with UWO, I know our hosts, intimately. You will like them.

We are a friendly society. Let's keep it that way.

MORE TIES WITH CANADA. The ESA has a sentimental tie with Canada, for when I set out to start this new society, this cabin porch of our Canadian summer camp was where I drafted the constitution and the other material that went to those who became our Charter Members.

Another thing: 10% of the registered attendance at our Albany Conference came from Canada.

MEMBERSHIP EXPANSION. If anyone is worried because our membership remains at somewhat above 100, I refuse to join in that concern. In these formative years, a small and cohesive group is all we need to be effective in various ways. Growth that is slow but enduring can be achieved by individual members who bring others in, and by all means, let us have some of that. But beyond this, there may be other ways. Suggestions, anyone? Do let me have them.

THE 1973 CONFERENCE. The program is shaping up. Working from this cabin porch office as Program Chairman, I have already lined up seven of our speakers. Let me mention two in particular.

First, William Bright, already mentioned in NEWS LETTER NO. 7: Head of E. E. at Southampton. Also, he now heads up the English equivalent of our ESA - The Static Electrification Group of The Institute of Physics. As such, he very much wants to attend our Conference, and develop close ties with us. But also, his very active research team, working under a Shell contract, "appears to have solved the tanker explosion" problem, as he puts it; and I am most pleased to report that he will present that subject on our program.

Second, I have an acceptance from Dr. A. P. Wehner of Battelle Northwest, to cover electro-aerosols, air ions, and their biological effects. You will recall that of the requests coming for reprints of my Electrostatics article in SCIENTIFIC AMERICAN, one-third arose in medical and allied areas. I hope that his appearance will serve as an opening wedge whereby the ESA acquires an active interest in the needs of the medical and biological areas, and that we may somehow encourage the large amount of research yet to be done in both.

CONFERENCE SHARINGS. Here comes a new idea, and I hope to give it a whirl at the Conference. Suppose you are not on the program, and since it has to be fixed in advance, can't get on it.

But you come, aching to share what's on your mind. You are developing a new process, and need help on a particular feature. Or you have made exciting progress in your research, and are bursting to tell about it. Or you have invented a corking good teaching aid, and want to spread it around. Or your firm needs a material; you suspect that it exists - can anyone say where to go for it? Or you have been consulted on a new and totally unexpected hazard (I have an ESA member in mind here!) that others would like to hear about.

What can you do about it? You can SHARE. You hand in a Brief, which can be read in one minute or less. When a meeting opens, the chairman reads the Briefs. As yours is read, you stand, to be identified. Then we leave it to you, and those interested, to get together in free time, and share ideas. I believe it will boost conference participation, and make for more of valuable contacts. I would like to hear from all who may wish to do some sharing.

CONFERENCE EXHIBITS. Those wishing to have exhibits at the Conference would do well to let me know of their plans. President Robinson and I will be going to UWO October 30 to confer with Ion Inculet and Peter Castle about exhibit space and other planning matters.

TIME TO THINK ABOUT THE NEXT EXECUTIVE COUNCIL. The two-year term of the present Council ends July 1, 1973. If you want to have a hand in naming the next one, you will need to get into action soon. Here are the rules:

1. A Council must be nominated as an entire slate: President, Vice-President, and three Council Members.
2. The Package Council (all living in one area) was amended out at the Albany Convention: the five can be living anywhere.
3. A Council slate can be self-nominated: and if so, one member of that slate must present the slate to the Secretary six months ahead of when the present Council expires (which means, by December 31, 1972). (Note: any member may stir up a slate without being on it himself; but a member of the slate must present it.)
4. Also, the existing Council may nominate a slate.
5. After validating the nominations, the Council has the Secretary present the slates to the membership four months before term end. The mail vote deadline is a month later. The slate with the largest number of votes is elected. If there is a tie, the Council breaks the tie.
6. Safety feature: if unusual circumstances prevent an election being held, the existing Council holds office until replaced.

OTHER NOTES. Hanging fire: our non-profit status. The application has long since been made, but governmental action cannot be hurried. An ESA member (president of his firm) has asked me, "What would it cost to support THE ELECTROSTATICS EXPERIMENTER for its first three years?" Here is where the non-profit status is needed, to encourage such ideas, leading to tax-exempt contributions. ---- President Robinson continues to work on various angles concerned with our having a Journal.

Electrostatics
Society of America

30 Shalimar Drive
Rochester, NY 14618

ESA Information

ESA Home Page: *http://www.electrostatics.org*

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