



**President**

Dr. Ernst-Christian Koch  
Centre for Defence Chemistry  
Cranfield University  
Shrivenham, Swindon, SN6 8LA, UK  
[e-c.koch@cranfield.ac.uk](mailto:e-c.koch@cranfield.ac.uk)



**Vice President**

Dr. Trevor Griffiths  
Bld 7H  
Fort Halstead  
Sevenoaks, Kent TN14 7BP  
UNITED KINGDOM  
[tgriffiths@qinetiq.com](mailto:tgriffiths@qinetiq.com)



**Vice President**

Mr. Pierre Thebault  
PYROCONSULTANT Sarl  
5 Allée Roland Garros  
31520 RAMONVILLE SAINT  
AGNE  
France  
[pthebault@pyroconsultant.com](mailto:pthebault@pyroconsultant.com)



**Treasurer**

Dr. Greg Knowlton  
4458 E. Juanita Ave.  
Gilbert, AZ 85234-7461  
USA  
Bus. 480-324-1775  
Fax 480-324-1776  
[gd.knowlton@gmail.com](mailto:gd.knowlton@gmail.com)



**Secretary**

Dr. Shingo Date  
Department of Applied Chemistry  
National Defense Academy  
1-10-20 Hashirimizu,  
Yokosuka, Kanagawa 239-8686  
JAPAN  
[sdate@nda.ac.jp](mailto:sdate@nda.ac.jp)



**Archivist**

Mr. Rutger Webb  
Clearspark, LLC  
Glendale, CA  
USA  
[rutgerwebb@gmail.com](mailto:rutgerwebb@gmail.com)



**Editorial**

Dear Madams and Sirs,

It is surprising to find how fast time flies by! This term 2012-2014 is coming close to the end and new elections are coming up. So, this issue of the newsletter is dedicated to introduce to you the candidates for the new IPS board and as to how to vote. Please read this newsletter carefully and please send me your vote.

**Please remember: YOUR vote counts! ☺**

Best regards,

Shingo Date



**40<sup>th</sup> International  
Pyrotechnics Seminar**

**The Major International  
Forum for Pyrotechnics**



13-18 July 2014, Colorado Springs, Colorado, USA  
<http://ipsusa.org/ips40.htm>

**Table of contents**

IPS Board Members .....	1
40th International Pyrotechnics Seminar .....	1
A Word from the President.....	1
Candidates for the 2014-2016 term.....	2
Dr. Ernst-Christian Koch .....	2
Dr. Trevor Griffiths.....	2
Mr. Pierre Thebault.....	3
Dr. Jesse Sabatini.....	3
Dr. Joost van Lingem.....	4
Dr. Gregory Knowlton.....	4
Dr. Shingo Date.....	5
Keep the Community informed.....	6
How to vote.....	6

**A Word from the President**

Dear Members of the Society:

With this newsletter we introduce to you the candidates for the up-coming board election.

Please exercise your constitutional rights and take part in the election.

We will inform you shortly before the upcoming International Pyrotechnics Seminar in Colorado Springs about the outcome of this election.

Best regards from Kaiserslautern/Germany.

Ernst-Christian Koch

## Candidates for the 2014-2016 term

The nomination committee has informed the IPS BOD about the following nominations.

<b>President</b>	Dr. Ernst-Christian KOCH
<b>President</b>	Dr. Trevor T. GRIFFITHS
<b>Vice-President</b>	Mr. Pierre THEBAULT
<b>Vice-President</b>	Dr. Jesse J. SABATINI
<b>Vice-President</b>	Dr. Joost VAN LINGEN
<b>Treasurer</b>	Dr. Gregory D. KNOWLTON
<b>Secretary</b>	Dr. Shingo DATE

## Dr. Ernst-Christian Koch



I started my chemistry studies at the Technical University of Kaiserslautern, Germany in 1987 receiving my diploma in 1993 and my doctorate, for a dissertation on organotransition metal chemistry, in 1995.

Following basic military service with the German Air Force and the Nuclear, Biological, Chemical Protection Centres at Sonthofen and Munster, Ernst-Christian I worked as Head of Development at the Göllheim Pyrotechnics works (Piepenbrock, Comet) from 1997 until 2001. I was Head of Pyrotechnics and Countermeasures from 2002-2003 at Diehl Munitionssysteme and became Head of Energetic Materials at Diehl BGT Defence, Röthenbach in 2004. In mid-2007 I was appointed Technical Specialist Officer Energetic Materials with the NATO Munitions Safety Information Analysis Centre (MSIAC) at NATO Headquarters in Brussels and joined NATO in January 2008. I left NATO in Summer 2013 and joined Cranfield University as a Senior Lecturer in Defence Chemistry in January 2014. Besides I am visiting lecturer at the Technical University of Kaiserslautern Germany.

I am a member of the Gesellschaft Deutscher Chemiker (GDCh), AG Fluorchemie, German Chapter of the Combustion Institute and Deutscher Sprengverband (German Blasting Society) and have recently been appointed a Fellow of the Royal Society of Chemistry (FRSC).

In the closing term (2012-2014) together with my fellow board colleagues I have facilitated high quality meetings such as the memorable IPS-seminar last year in Valencia Spain, I have promoted the exchange of scientific information through our Society Journal *Propellants Explosives Pyrotechnics* and supported young scientists with the IPS-Dr. Bernard E. Douda-Young Scientist Award.

In the coming term my main task as president will be to support French AFP and GTPS in their efforts to organise and run a successful EURO-PYRO-IPS Seminar in May 2015 in Toulouse. In addition I will put further effort into improving our member services with a particular view on the website and web-archive which both have suffered some lack of support recently.

## Dr. Trevor Griffiths

### Background

I graduated from Imperial College, London University with a BSc and a PhD in Chemistry. During my career, I have developed a deep technical understanding of energetic materials. I have led the delivery of research to UK MoD on many different aspects of Energetic Materials.



In 1999 I was appointed as a Fellow of the Royal Society of Chemistry and became a Chartered Chemist.

I have published more than 250 reports and papers, made over 100 presentations and have been an invited speaker or co-chair at a number of international conferences. I have organised and co-chaired two International Conferences on the Heat Flow Calorimetry of Energetic Materials. I am a QinetiQ Fellow.

In 2009, a US Department of Defense project I technically managed was given a Strategic Environmental Research and Development Program (SERDP) Project of the Year award.

### Current activities

I work at Fort Halstead near Sevenoaks in the UK for the Anglo-American company QinetiQ. I provide strategic leadership of the Energetics Facilities of around 30 staff to successfully deliver work to UK MoD and commercial customers.

### My nomination

I have been a member of the Society for many years and supported virtually every meeting by both attending and presenting, I have often served as a Session Chair and last year gave the closing remarks at the seminar held in Spain.

I have been Vice-president for the last four years and I am a trustee of the Frank Carver Bursary Fund (FCB), I recently reworked the FCB aspects of the IPS constitution to allow more flexibility with payments from the funds and charity in the UK.

I would the opportunity to serve as President so that I can continue to promote the Society, encourage new countries to host future seminars and establish links with other societies interested in Energetic Materials.

---

## Mr. Pierre Thebault

PYROCONSULTANT Sarl

5 Allée Roland Garros

31520 RAMONVILLE SAINT  
AGNE

France

Born in 1947

Married, 2 children, 2 grand-  
children

37 years of experience in pyro-  
technics



After studying aerospace engineering in Ecole Nationale d'Aéronautique et de l'Espace (ENSAE), I started my professional career in 1973 as an engineer in Société Européenne de Propulsion (Bordeaux – France) where I have quickly (from 1977) been involved in the development of pyrotechnic systems, mainly igniters for solid and liquid propellant rockets and explosive pyrotechnic actuators.

In 1982 I entered Etienne Lacroix Tous Artifices S.A. company where I spent all the rest of my professional career until December 31<sup>st</sup>, 2013. Firstly my position was Chief Operational Executive of the Defense Department, supervising and managing research and development as well as production activities. I was also in charge of all aspects of health, safety and environment protection.

In 1997, after Lacroix acquired Ruggieri Company, I joined the headquarters of the Lacroix Group as Deputy Chief Executive especially in charge of all technical and industrial activities within the Group, from fireworks to defense pyrotechnic articles, space applications to law enforcement products, ignition devices to demilitarization of ammunition.

From 2009, I participate to the development of European standards for the civilian pyrotechnic industry by the European Committee for Standardization (CEN), as the convener of the CEN Working Groups that deals with professional fireworks and as the convener of another CEN Working Group that deals with all pyrotechnic articles that are not fireworks, theatrical articles and automotive pyrotechnic articles, which – in fact – means a large variety of

“other pyrotechnic articles”. This participation was recently extended to the development of ISO standards for fireworks and I am presently the convener of the ISO Working Group dealing with test methods.

In December 2011, I was elected President of the French Association of Manufacturers of Explosives, Pyrotechnics and Fireworks (SFEPA) and my mandate is still active.

From January 1<sup>st</sup>, 2014 I am retired but still works as a consultant in the field of explosives and pyrotechnics. I incorporated my own company, PYROCONSULTANT Sarl, to cover these consulting activities.

As one of the former Vice-Presidents of IPS, I act as one of its representatives in Europe and – first of all – in France, French-speaking and Latin countries (Italy, Spain, Portugal) where I have various contacts. I support every activity of IPS in Europe such as preparing symposia (Valencia in 2013 as technical advisor of AIDICO, Toulouse 2015), motivating speakers and keeping active links with the EUROPYRO organizing committee.

Indeed I would be again honored to participate in the work of the Board of IPS to promote a positive image of pyrotechnic activities and facilitate exchanges between specialists in explosives and pyrotechnics across the Atlantic Ocean.

---

## Dr. Jesse J. Sabatini



Dr. Jesse J. Sabatini received his Ph.D. in synthetic organic chemistry from the University of Virginia. Following postdoctoral research at the University of Pittsburgh, he was hired by the Pyrotechnics Technology and Prototyping Division at the Armament Research, Development and Engineering Center (ARDEC). His current research interests lie in the formulation development of visible light and infrared illuminants, smoke munitions, primer compositions, and incendiary devices, as well as the synthesis of novel energetic materials. Dr. Sabatini is currently the Secretary



of International Pyrotechnics Seminars USA, Inc. He is the co-chair for the 40<sup>th</sup> IPS, and served on the Technical Steering Committee for the 38<sup>th</sup> IPS. Dr. Sabatini is currently the co-chair for the Workshop on Pyrotechnic Combustion Mechanisms, as well as the co-chair of the “Green” Energetics Panel for the Joint Army-Navy-NASA-Air Force (JANNAF) meetings.

Since his arrival at Picatinny Arsenal, Dr. Sabatini has authored 15 peer-reviewed publications, has two patents granted by the United States Patent and Trademark Office, and has four additional patents pending. He is the author of a book chapter on the subject of “green” pyrotechnics, and has been invited by the Wiley publishing company to write a book on this aforementioned subject. He currently serves as a peer-reviewer of manuscripts submitted to 11 scientific journals. His work in illumination has been cited in press releases by *Nature*, the *American Chemical Society*, the *Royal Society of Chemistry*, the *German Chemical Society*, *Scientific American*, the *British Broadcasting Company*, and the *Munitions Safety Information Analysis Center (MSIAC)*. Dr. Sabatini has delivered numerous invited lectures on the subject of pyrotechnics at colleges, universities, conferences and symposia. Dr. Sabatini is a member of the *International Pyrotechnics Society*, the *National Defense Industrial Association*, the *American Chemical Society* and the *Royal Society of Chemistry*.

## Dr. Joost van Lingen

joost.vanlingen@tno.nl  
29-10-1977

Joost van Lingen did his master in physical chemistry and received a PhD in the field of catalysis at the Utrecht University (The Netherlands). Here he combined quantum chemistry with spectroscopy



to elucidate the structure of a catalyst. In 2007 he started working at TNO (the Netherlands) as a research scientist in the energetic materials group, specializing in pyrotechnics. During the years his role changed from project manager to program manager development of environmentally friendly fireworks. Currently his main responsibility is product team manager of co-development of energetic materials and munitions. In this role he has the responsibility for the work of the product team with regard to strategy, market development, publications, facilities, equipment and scientific development.

### Activities:

2011 – present

Principal Investigator in SERDP project WP-2148 Technical feasibility study of an effective low-toxicity obscurant material and future PI of the follow-on

2011 - present

Secretary of Technical Group of EDA’s “Future Flare Compositions”

2009 - 2013

Co-promotor of PhD student Justine Corbel, in cooperation with the Utrecht University on strobing pyrotechnics

2009

Co-chairman organization International Pyrotechnics Symposium 2009

2002 - present

Member of the Royal Dutch Chemical Society

### Recent Publications:

- Corbel, J.M.L., Lingen, J.N.J., Zevenbergen J.F., Gijzeman, O.L.J. and Meijerink A., (2013). Study of a classical strobe composition, *Propellants, Explosives, Pyrotechnics*, 38(5), 634 – 643.
- Corbel, Justine M. L.; van Lingen, Joost N. J.; Zevenbergen, John F.; Gijzeman, Onno L. J.; Meijerink, Andries, Stobes: Pyrotechnic Compositions That Show a Curious Oscillatory Combustion, *Angewandte Chemie, International Edition* (2013), 52(1), 290-303
- Corbel, Justine M. L.; van Lingen, Joost N. J.; Zevenbergen, John F.; Gijzeman, Onno L. J.; Meijerink, Andries, Stobes: An Oscillatory Combustion, *Journal of Physical Chemistry B* (2012), 116(16), 4967-4975
- Koch, E-C, Weiser, V. Roth, E., Knapp, S., van Lingen, J., Moorhoff, J., Metal-Fluorocarbon Pyrolants XV: Combustion of two Ytterbium-Halocarbon Formulations, *J.Pyro*, 31, 2012, 3-9
- van Lingen, Joost N. J.; Gijzeman Onno L. J.; Havenith Remco W. A.; et al., Determining the structure of silica-supported monomeric vanadium oxide catalysts based on synthesis method and spectral data from theoretical calculations, *J. Phys Chem. C* 2007, 111, 19, 7071-7077
- van Lingen, J. N. J.; Gijzeman, O. L. J.; van Lenthe, J. H.; Weckhuysen, B. M., On the Umbrella Model for Supported Vanadium Oxide Catalysts, *J. Cat.* 2006, 239, 34.

## Dr. Gregory Knowlton

Dr. Knowlton recently retired (March 2011) from Nammo Talley, Inc. after 31 years of service. He is currently employed part-time by Reactive Metals International, Inc. (RMII) as a Principal Research Investigator and by PyroSmart as a Consultant. Dr. Knowlton also manages his own consulting business/service, Pyrogetics, LLC.



## Experience:

During his years (June 1980 through March 2011) with Nammo Talley, Inc. (formerly Talley Defense Systems), Dr. Knowlton held the following positions of increasing responsibility: Senior Chemist, Principal Investigator, Manager of Pyrotechnics and Explosives, Manager of Research, Director of Research, Director of Research & Test and Chief Scientist.

These positions involved major technical and managerial responsibility for program work in the areas of formulation development, analysis, characterization, processing, safety, diagnostics and testing of gas generators, propellants, pyrotechnics and explosives.

Dr. Knowlton has published over 30 papers and authored over 30 technical reports in the areas of inorganic and analytical chemistry, pyrotechnics, propellants and explosives. He also holds 14 U.S. and 3 foreign patents for sodium azide-based nitrogen gas generating formulations, non-azide gas generating pyrotechnic formulations, pyrotechnic autoignition compositions for use in both civilian (automotive airbag, fire suppression) and military (munitions dispersion) applications, and heat transfer delays and igniters.

## Education:

Ph.D. Inorganic/Analytical Chemistry, Arizona State University, 1982

B.S. and M.S. Chemistry, San Jose State University, 1974 and 1976

## Memberships:

American Chemical Society, Member, since 1973

National Defense Industrial Association (1983-2011)

American Institute of Chemists, Fellow, since 1986

International Society of Explosives Engineers, Member since 2010

International Pyrotechnics Society, Treasurer since July 2004

IPSUSA, President since August 2012 (Vice President June 2010-July 2012)

JANNAF Propellant Development/Characterization, Propulsion, and Combustion Subcommittees (1983-2011)

WETC/DOTC/DOLC Co-Chairman for Pyrotechnics Section (2000-2007)

SAE - Chairman, "Inflatable Restraints Standards Committee" (1999-2001).

## Candidate's Statement:

As IPS Treasurer for the past 10 years, I have enjoyed the opportunity to interact with both new and continuing members in person or via mail/e-mail or telephone. Serving on the Board of Directors for the IPS has been challenging, as well as rewarding. In continuing as the Society's Treasurer for the next 2 years, my objective would be to maintain continuity in the area of IPS funds and financial dealings (e.g. paying bills, collecting dues, sponsoring/supporting individuals and activities, etc.). My goal, as always, is to do the very best job I can serving the Membership of the IPS as Treasurer and as a member of the IPS Board of Directors.

## Dr. Shingo Date

Born in 1969, Dr. Date received the Doctor of Engineering degree in Chemical System Engineering from the University of Tokyo in 1998. On the same year, he joined the National Defense Academy in Yokosuka, Kanagawa, Japan. His current position is Associate Professor at the Department of Applied Chemistry at the Academy, teaching classes and lab work in the fields of chemistry and energetic materials, as well as doing research on energetic materials with the current focus on gas generating agents (also did some work previously on explosive reactive armors). He also worked as a Postdoctoral Research Scientist at New Mexico Institute of Mining and Technology in Socorro, New Mexico, USA in 2004-2005. He has authored/co-authored over 20 peer-reviewed journal articles, recently co-authored a textbook (in Japanese) on explosives, and he has made/co-authored 90 presentations including 25 international conference presentations. He has been a member of the *International Pyrotechnics Society* since 2008, and he is currently the Secretary of the *International Pyrotechnics Society* from 2012, as well as an International Steering Committee member of the International Pyrotechnics Seminar and an International Advisory Committee member of the Workshop on Pyrotechnic Combustion Mechanisms. He is also a member of the *International Shock Wave Institute*, *Japan Explosives Society*, and *Combustion Society of Japan* to name the few.



## Candidate's Statement:

I have enjoyed serving the members of the Society for the past 2 years as the Secretary of the Society, and as a candidate for the second term, I hope that I could continue to be of some assistance in the world-wide academic interactions of the members of the Society.

## Keep the Community informed

Whether you have been awarded a prize, you have been promoted, you have transitioned to another job, taking a sabbatical year, whatsoever it is, please let the community know and drop us an e-mail at the following address: [c.koch@cranfield.ac.uk](mailto:c.koch@cranfield.ac.uk) or [sdate@nda.ac.jp](mailto:sdate@nda.ac.jp)

---

## How to vote

Attached to the mail with which you received this newsletter is the ballot for the 2014-2016 term IPS Board elections. Please note here this time that there are two candidates for president with one vote to be cast, and three candidates for vice-president with two votes to cast. You could either do electronic voting or manual voting. Both processes are equally anonymous as a result of procedure. Please find instructions below.

### **1. *Electronic voting***

For electronic voting you need to open the ballot with MS WORD -97/2003 or higher. To vote for a candidate, replace the circle behind the candidates name with an X. Save the file as "IPS-Ballot.ppt" and please return the file as an attachment to an e-mail to: [sdate@nda.ac.jp](mailto:sdate@nda.ac.jp)

### **2. *Manual Voting***

For manual voting, please print out the ballot with MS POWER POINT 97/2003 or higher. To vote for a candidate, mark the circle behind the candidates name with an X either with a ball-pen or fountain-pen. Do not use a pencil. Fold ballot twice and please send it by mail to:

**Shingo Date**  
**Department of Applied Chemistry,**  
**National Defense Academy**  
**1-10-20 Hashirimizu, Yokosuka,**  
**Kanagawa 239-8686, JAPAN**