

# Global Exposure Manager



The newsletter of the International Occupational Hygiene Association

September 2017 | Issue 6



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[www.ioha.net](http://www.ioha.net)

# Interview with Deborah Nelson, president of the AIHA

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Frank Zaworski spoke to Deborah Nelson about the challenges facing the association and industrial hygienists generally.

**Zaworski: What is the mission of the American Industrial Hygiene Association (AIHA) and how has it evolved to assist its member industrial hygienists?**

**Nelson:** In short, the mission of AIHA is protecting worker health. More broadly, we protect and enhance the health and safety of people at work and in their communities by supporting industrial hygienists (IHS) and occupational and environmental health and safety (OEHS) professionals.

We develop and provide best-in-class publications, conferences, short courses and webinars, and manage three laboratory accreditation, proficiency analytical testing and registry programmes. I've been a member since 1977 and during that time I have seen increased emphasis on innovative member services and enhanced governmental relations activities, both at state and federal levels, as well as scholarships and mentoring for students and early career professionals.

**Zaworski: What are three major challenges faced by the IH community today. How do they differ from the past? How are the association and other stakeholders working to address these challenges?**

**Nelson:** In my opinion, one of our immediate challenges is the impending retirement of a large percentage of our members, many of whom joined the profession and the association during the early years of the Occupational Safety and Health Administration (OSHA).

In contrast with previous years, when the safety, health and environmental professions were expanding, we now see fewer students entering academic programmes in these areas and subsequently joining the workforce. We're working hard to attract students to the profession and at the same time to create more demand for IH and OEHS professionals by educating the public about our profession and how we can help control a wide array of hazards, from traditional workplace hazards, such as lead and silica, to radon, mould, ergonomics and natural disasters.

Second, we've dealt with the dynamic tension between IH science and OEHS practice. Without doubt, most of our members are involved in a range of issues including safety, environment, security, workplace violence and health and wellness programmes. However, as an association we need to focus our resources on the area where we're best in class – specifically the science of

IH. Over the last several years, our Content Priority Advisory Group has identified key emerging technology focus areas where we can support the development of new knowledge and generate publications to disseminate it. Such areas include sensor technologies, Big Data and emergency preparedness and response. And third, we're being even more careful with our resources. Our budgets undergo intense scrutiny. For several years now, the board of directors has had three fewer directors.

**Zaworski: No need to be political here, but how is AIHA responding to the anti-science attitudes in some sectors of government?**

**Nelson:** IH is a science - and an art - and it is based on scientific methods and knowledge. As I mentioned before, we're working hard to ensure that the public knows who we are – highly educated and experienced professionals – and what we can do.

Our efforts with the National Institute for Occupational Safety and Health's (NIOSH) Safety Matters programme, which is dedicated to providing safety and health training to young workers, will not only help prevent occupational injuries, illnesses and fatalities, but will also introduce young people to the science of IH. Our award-winning IH Professional Pathway materials support the various career stages of the profession. And stay tuned for some really fun materials we're developing to catch the interest of younger kids.

We're really pleased with the increased efforts in governmental relations, which include ensuring the federal agencies our profession depends on, like NIOSH, OSHA and the Mine Safety and Health Administration (MSHA), receive suitable funding to deploy their missions. We've ramped up efforts to encourage our members to engage with our elected representatives and governmental officials, to ensure that they have the most accurate information on the impacts, causes and control of workplace hazards.

**Zaworski: Proposed cuts to the budgets of some federal agencies (the Environmental Protection Agency (EPA), for example) could hinder their ability to fulfill their mandate. Could such cuts mean that greater responsibility for employee health and safety will be placed on hygienists at state and local levels?**

**Nelson:** That could very well be true, if by 'local' level you include IHS in organisations. We've already moved beyond compliance and potential liability as being the prime motivators for organisations to invest in workplace health and safety. IH and OEHS professionals must be able to make the business case for health and safety programmes.

The triple bottom line and enterprise risk management - and even social media, with its potential to influence public opinion - have become important drivers. I'm very optimistic about the work being done by the Center for Safety & Health Sustainability (CSHS), which has highlighted the influence of major shareholders in corporate decision-making and reporting on health and safety issues. IH and OEHS professionals may find themselves playing a more important role in the C-suite and the boardroom.

**Zaworski: Does AIHA believe that globalised standards for hazardous exposure levels are possible? Are global standards feasible? If so, how can they be accomplished?**

**Nelson:** AIHA supports occupational exposure limits (OELs) as a primary tool in disease prevention and believes they are an essential part of a comprehensive occupational safety and health programme. However, Niosh says that of the 85,000 chemicals that are commercially available, quantitative health-based OELs have been developed for only about 1,000.

The difficulties of developing OELs, including lack of data, scientific uncertainty and legal challenges, argue against there ever being specific OELs for most of the chemicals used in the workplace. The work done by Niosh in occupational exposure banding (OEB) may ease the logjam. Available data on chemical toxicity is used to categorise chemicals into one of five bands, ranging from the highest to the lowest concentrations.

As more data and/or resources become available, an OEB can be replaced, for example, by a quantitative health-based OEL. In contrast to control banding, the OEB does not direct the user to a recommended control technique. Control banding, which has found wide use internationally in a range of workplace situations, classifies workplace risks into specific control categories or bands, based on combinations of hazard and exposure information, and recommends a control technique.

The World Health Organisation (WHO) could play an important role in the development of quantitative health-based OELs, with its process of assembling international teams of experts. However, in my opinion, the application of globalised standards for hazard exposure levels is problematic. Economic and technological feasibility, along with national acceptance, would limit the use of globalised standards, particularly in non-industrialised nations.

**Zaworski: How does AIHA cooperate with groups such as the International Occupational Health Association (IOHA) to improve the health and safety of workers worldwide?**

**Nelson:** AIHA is a member organisation of the IOHA and as such participates in its projects and activities. Our new liaison to IOHA, Dr. Tom Fuller, is eminently qualified and will strengthen this interaction. We'll be hosting the 11th IOHA International Scientific Conference in Washington, DC, in September 2018.

We have memoranda of agreement with a number of domestic sister associations, including a new memorandum of understanding (MoU) with the American Society of Safety

Engineers (ASSE). We also have agreements with Niosh and Osha. Our immediate past president, Dr. Steven Lacey, has been working closely with Niosh to implement the Safety Matters campaign.

Internationally, we have agreements with associations in South Africa, Vietnam and India. I'm especially pleased with our new MoU with the Occupational Hygiene Training Association (OHTA), under which we are now an approved training provider.

**Zaworski: How does AIHA work with industry partners to improve health and safety?**

**Nelson:** While we don't have formal agreements with industry partners, about one-third of our members are employed in private industry. It's our largest employment category, with the other major categories including consulting firms (about 25%) and in government, the military or academia (each about 10%).

Our members from industry are active members of our technical committees and our board of directors. For example, members from the healthcare industry have contributed to guidelines for respiratory protection, safe patient handling and working with hazardous drugs. Members from manufacturing have made major contributions to exposure assessment science, and on stewardship, personal protective equipment, and sampling for nanomaterials. Other topical areas that have benefited from input by industrial members include preventive guidelines for exposure to Legionella, formaldehyde and the body of knowledge for direct reading instruments.

In closing, I'm very optimistic about the future of AIHA. With our focused approach on priority topics, greater opportunities for members to 'micro-volunteer' and 'opt in' to projects and teams, increased efforts to recruit young people into the profession, and our new CEO, Larry Sloan, at the helm, I'm looking forward to even greater accomplishments in 2017 and beyond.

### About Deborah Nelson

Deborah Imel Nelson earned her BSES and MSES from the University of Oklahoma's College of Engineering and her MPH and PhD in Environmental Health at the University of Oklahoma Health Sciences Center. She has been certified in the comprehensive practice of industrial hygiene since 1981 and served as an Osha IH compliance officer and as a professor of environmental science at the University of Oklahoma.

For two years, Deborah was an occupational health scientist with the WHO in Geneva, Switzerland, where she conducted exposure assessments of the global burden of occupational injury and illness. She recently retired from the Veterinary Services department of the US Department of Agriculture, where she was the first safety and occupational health manager.

Deborah is a fellow of the AIHA and is currently serving as its president. She co-founded the Risk Assessment Committee (now the Risk Committee), the Control Banding Working Group (now the Exposure and Control Banding Committee) and the Fellows Special Interest Group.

## Niosh releases EHRMS Info Manager

The National Institute for Occupational Safety and Health (Niosh), the US federal institute that conducts research and makes recommendations for preventing work-related injuries, illnesses and deaths, has announced the availability of a new software platform called ERHMS Info Manager. This can be used by anyone involved in the deployment and protection of emergency responders, including:

- incident command staff;
- response organisation leadership;
- health, safety and medical personnel; and
- emergency responders.

ERHMS Info Manager is designed to track and monitor emergency response and recovery worker activities at all stages following a natural disaster or other public health emergency. It is part of the implementation of Niosh's Emergency Responder Health Monitoring and Surveillance (ERHM) framework, which was devised in partnership with other federal agencies after the collapse of the World Trade Centre and the subsequent health problems experienced by responders.

“The nation depends on more than three million emergency response workers, who are trained and prepared to respond to disasters and other emergencies where they often face hazardous conditions,” said Niosh director Dr John Howard. “ERHMS Info Manager streamlines the important task of response worker health monitoring and surveillance, saving organisations time while ensuring the health and safety of emergency responders.”

ERHMS Info Manager uses the Center for Disease Control's publicly accessible data management and informatics tool, Epi Info, for creating forms, and capturing and analysing data specific to emergency response situations. This allows users to:

- Create responder profiles;
- Record response incidents and map incident locations;
- Assign responders to an incident roster;
- Design forms and surveys using custom and pre-built templates;
- Request information from responders by using forms and surveys; and
- View and analyse forms and survey responses.

Alongside this, Niosh has created a new landing page on its website for information related to emergency responder health monitoring and surveillance ([www.cdc.gov/niosh/erhms/default.html?s\\_cid=3ni7d2-pr-erhms-09052017](http://www.cdc.gov/niosh/erhms/default.html?s_cid=3ni7d2-pr-erhms-09052017)). This gives access to:

- the ERHMS framework;
- online training tools;

- the ERHMS Info Manager software, user manual, and training videos; and
- additional resources.

**For more information, see:** [www.cdc.gov/niosh/](http://www.cdc.gov/niosh/)

## SOFHYT holds annual Occupational Hygiene Week

As it had done in 2016, the French Occupational Hygienists Society, SOFHYT, organised its Occupational Hygiene Week in mid-June. The main event was the annual forum discussion entitled ‘Assessing risk without measuring it’.

Representatives from the French Ministry of Labour and the National Research and Safety Institute (INRS) came to the event to advise the public about the new regulation relating to electromagnetic radiation. Professor Jacques Malchaire of the Catholic University of Louvain in Belgium explained the thinking behind the development of the SOBANE risk prevention strategy.

The latest update of the French SUMER study, which is driven by occupational physicians, covered new areas of knowledge about working conditions. Some tools for occupational hygienists were demonstrated, including OSERAY, which INRS developed to enable employers to evaluate the risks from electromagnetic radiation.

The afternoon was dedicated to learning experiences from companies, including the use of tools from Lubrizol, 3M and Solvay. Speakers repeatedly emphasised two themes:

- The need for all participants to work together and that workers must be part of the risk assessment process; and
- The value of allocating appropriate resources for risk assessment, so that simple situations can be assessed at operator level, allowing occupational hygienists to focus their efforts on critical situations that require more technical competencies.

**For more information, see** [www.sofhyt.fr](http://www.sofhyt.fr)

## AIHA wins three awards

The American Industrial Hygiene Association (AIHA) has won three dotCOMM awards in recognition of the #IAMIH campaign, which was launched earlier this year. The dotCOMM Awards honour excellence in web creativity and digital communication, with entries coming from communication professionals of all kinds in many different industries.



AIHA won platinum dotCOMM awards for excellence in documentary filmmaking for its first-ever day-in-the-life documentary on an industrial hygienist and for the first-ever #IAMIH comic, and a gold award for the campaign's website ([www.ihheroes.org](http://www.ihheroes.org)). The campaign features three day-in-the-life video installments, with the first two out already and the last due to be released in early November.

The documentaries, created with LAI Videos, sought to capture industrial hygienists in a variety of professional environments from the forensics labs of the Michigan State Police to the steps of the US Capitol and the campus at 3M. Participants took viewers on facility tours and shared their career stories, to raise awareness of industrial hygiene as a profession.

The comic book, illustrated by Klaus Scherwinski, follows a character called IH Hero Rebecca as she is called in for a special assignment on a South Pacific island recently devastated by a tsunami. AIHA said that it hopes the #IAMIH campaign "will help inspire the next generation of industrial hygienists".

**For more information, see [www.aiha.org](http://www.aiha.org)**

## **BOHS focuses on asbestos**

The British Occupational Health Society (BOHS) will emphasise the issue of asbestos in the coming months. On 11 October, the society will launch its new faculty for asbestos professionals, the Faculty of Asbestos Assessment and Management (FAAM), and will hold the first of a programme of asbestos roadshows. The full roadshow schedule is:

- Wednesday 11 October: London – Holiday Inn, Wembley
- Wednesday 18 October: Glasgow – The Studio
- Tuesday 31 October: Cardiff – Mercure Cardiff Holland House Hotel
- Monday 6 November: Manchester – The Studio



BOHS is running these in conjunction with the Health and Safety Executive (HSE). The aim is to help companies who work with asbestos and/or manage asbestos risks to keep up to date with key developments in the industry, including information regarding the duty to manage and the HSE's asbestos analyst inspection

programme. Planned subjects for inclusion are:

- FAAM;
- asbestos in soils;
- asbestos: the duty holder guide;
- the legal perspective – sentencing guidelines;
- the HSE's analyst inspection programme; and
- Control of Asbestos Regulations (CAR 2012).

**For more information, visit [www.bohs.org](http://www.bohs.org)**

## **Osha, ACC in polyurethane safety alliance**

The Occupational Safety and Health Administration (Osha) and industry association the American Chemistry Council (ACC) have established a two-year alliance to raise awareness of how workers are exposed to diisocyanates and to promote safe practices for their use in the polyurethane industry. This calls for:

- a web-based training programme on the safe use of chemicals and the potential routes of exposure to users;
- developing guidance on medical surveillance and clinical evaluation techniques for employers and workers using the chemicals; and
- best practices seminars on health and safety procedures for Osha, on-site consultation and State Plan staff.

Isocyanates are raw materials used to make polyurethane products, such as insulation, car seats, foam mattresses, shoes and adhesives. Exposure to them can cause irritation of the skin and mucus membranes, chest tightness and difficulty breathing. More serious health effects include asthma and other lung problems.

Osha is the federal agency in charge of setting and enforcing standards for health and safety at work, and providing training, education and assistance. Through its ongoing alliance programme, it works with trade and professional organisations and other bodies to prevent workplace fatalities, injuries and illnesses by developing compliance assistance tools and resources and through worker education.

**For more information, visit [www.osha.gov](http://www.osha.gov)**

## **IOHA 2018: Call for proposals**

The theme of the IOHA International Scientific Conference in Washington, DC, in September 2018 is



'Bringing better health to workers worldwide'. IOHA is looking for experts like you to contribute to the profession by submitting a proposal for a professional development course or education session in your area of expertise. The call for proposals opens on 3 January and the deadline to submit a proposal is 29 January, 2018.

**For more information or to submit a proposal please visit: [www.aiha.org/events/ioha2018/pages/default.aspx](http://www.aiha.org/events/ioha2018/pages/default.aspx)**

# Malaysia: Industrial hygiene outreach programme



MIHA organised health hazard classification training for health risk assessor training



MIHA invited as a speaker in SMART College IH forum 2017

## The Malaysian Industrial Hygiene Association is promoting industrial hygiene and continuing its education programme

As part of Malaysia's Occupational Safety and Health Master Plan (OSH-MP) 2020 to support the strategy of mainstreaming industrial hygiene (IH), the Malaysian Industrial Hygiene Association (MIHA) has been actively involved in an outreach initiative designed to drive and promote IH nationally. This is called the Industrial Hygiene Catalyst Committee (IH2C) and MIHA is represented on it by Ng Hon Seng and Marina Zainal Farid.

IH2C aims to meet the following objectives:

- Fostering collaboration with various associations, industries, NGOs, health and safety practitioners, government bodies and agencies;
- Promotion and distribution of IH information;
- Increasing participation in IH-related programmes and activities;
- Effective dissemination and enforcement of IH regulatory requirements; and
- Increasing IH awareness amongst employers, workers and the public.

MIHA is expecting to play a major role in ensuring the success of IH2C in achieving its objectives. Among the future plans discussed were:

- establishing a platform to share affordable means of controlling exposure to health hazards at the workplace and targeting small and medium-size enterprises (SMEs);
- organising IH in school programmes, focusing on laboratory chemical safety and ergonomics issues; and
- developing local-content promotional videos on IH to effectively convey the message and increase public awareness.

Of equal importance, 17 August marked another milestone for MIHA, when its president, Norhazlina Mydin, officially signed a memorandum of understanding with the Korean Industrial Hygiene Association (KIHA) during its summer conference at Gyeongju, South Korea. This, MIHA said, "will undoubtedly strengthen the IH capability and professional sharing platform between both countries and their respective safety and health practitioners".

Simultaneously, the MIHA Student Chapter organised its first international educational trip to this conference, led by the team leader of its University Relations Committee, Megat Azman Megat Mokhtar. Three lecturers and 25 students from Universiti Teknologi MARA (UiTM), Cyberjaya University College of

Medical Sciences (CUCMS), Universiti Sains Malaysia (USM) and Universiti Putra Malaysia (UPM) also took part. The delegates attended the KIHA summer conference and also visited Hyundai Heavy Industry, the Korean Occupational Safety and Health Agency, Soon Chun Hyang University in Seoul and the 3M Exhibition.

As a way of adding value to its stakeholders, as well as its contribution in supporting the IH outreach programme under IH2C, MIHA frequently speaks at events. For instance, Kim Kek Seong gave a speech entitled 'Nurturing industrial hygienists' at the SMART College IH Forum 2017 at Kuala Lumpur on 13 July.

In line with its mission, MIHA continues to organise its various yearly regional training programmes aimed at enhancing IH knowledge and awareness. Among the training events that have been recently conducted, all at the Corus Hotel in Kuala Lumpur, have been:

- Industry code of practice (ICOP) classification, labelling and safety data sheets (CLASS) 2014 implementation for chemical classifiers, 11-13 July, with trainer Anuar Mohd Mokhtar;
- Health hazard classification for health risk assessors, 27 July, with trainer Shabanon Sharif; and
- Guidelines on the use of PPE against chemical hazards, 22-23 August, with trainer Sherlyn Voon Chel Ling.

Moving forward, MIHA is gearing towards achieving and maintaining the highest standards in IH by overseeing and professionally certifying Malaysian industrial hygienists through its established and IOHA-recognised certification scheme, Certified Professional Industrial Hygienist (CPIH). The first oral examination for CPIH candidates will be held in October.



*Summer academic tour programme 2017 in South Korea*



# Events

## 13th International Conference on Industrial Health, Safety and Environment

16-17 October 2017

Dubai, UAE

Organised by Conference Series, the conference programme includes plenary lectures, symposia, workshops on a variety of topics, poster presentations and various programs for participants from all over the world. The focus is on industrial health, addressing such concerns as exposure to asbestos, mining and milling dusts, metal and acid vapours, lighting and ergonomic factors. [www.industrialhealth.conferenceseries.com/](http://www.industrialhealth.conferenceseries.com/)

## Southern African Institute for Occupational Hygiene (SAIOH) Annual Conference 2017: Occupational Hygiene: Building Bridges Beyond Borders

25-27 October 2017

Misty Hills Country Hotel and Conference Venue, Gauteng, South Africa

The event includes keynote presentations from Marianne Levitsky, president of Workplace Health Without Borders in Canada, Eric Esswein of the National Institute for Occupational Safety and Health (NIOSH) in the US and Professor Jérôme Lavoué of the University of Montreal in Canada. There are also four pre-conference professional development courses, invited regional and national presenters and sessions dedicated to the New Partnership for Africa's Development, 'All things certification', stakeholders in occupational health and student presentations. [www.saioh.co.za/page/Conference17](http://www.saioh.co.za/page/Conference17)

## AIHA Fall Conference

30-31 October 2017

Tampa Marriott Hotel, Tampa, Florida, USA

The AIHA Fall Conference features education and enrichment programmes, including table discussions, workshops, networking opportunities and roundtables. Attendees also have opportunities to earn CM credits and CEU/COC points towards their certifications. Over the course of four days, there are multiple dedicated sessions on the following themes: enterprise risk management and risk assessment; emergency

response and preparedness; management and leadership; and, 'emerging issues and international'. [www.aha.org/events/2017FallConference/Pages/default.aspx](http://www.aha.org/events/2017FallConference/Pages/default.aspx)

## 23rd Occupational Health Week: 'The Human Being in the Future of Work,' including: 37th Congress on Ergonomics, Hygiene, Medicine and Occupational Security and 16th Colombian Congress on Ergonomics and More Human Work Environments and Daily Life

31 October-3 November 2017

Hotel Intercontinental, Medellín, Colombia.

The event seeks to raise awareness and promote: the rules and ethics of occupational health; research, techniques and developments relating to health and safety at work; and, application and experiences. Themes include: age and work; applied ergonomics; education and culture for health and safety at work; environmental management; gender- and work-integrated risk management; implementation of Colombia's General System of Security and Health at Work (SG-SST) legislation and regulations; occupational hygiene and the environment; managing health and safety at work; occupational preventative medicine; psychosocial risks; supervision and vigilance trends in health and security at work; toxicology; and, vibrations. [www.semanadelasaludocupacional.com.co](http://www.semanadelasaludocupacional.com.co)

## 35th AIOH Annual Conference 'Connect2Prevent', National Convention Centre

2-6 December 2017

Canberra, Australia

The conference will bring together some 500 international and national representatives from industry, defence, public authorities, research, academia and consultants, as well as suppliers of equipment and services to explore and discuss opportunities and strengths related to occupational hygiene. It includes the conference gala dinner, at which all the major awards will be presented. Another feature is the exhibition, featuring 'Excite', a platform to present products, services or personnel in five-minute presentation over lunch. [www.aioh.org.au/aioh2017/aioh2017](http://www.aioh.org.au/aioh2017/aioh2017)

The *Global Exposure Manager* has been compiled for IOHA by the on-line information service, Chemical Risk Manager.

### Disclaimer

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**CALL FOR  
PAPERS**

# OH2018

## STRATFORD- UPON-AVON

The Premier Conference for  
Occupational Hygiene in the UK

**16-19 April 2018**

**Crowne Plaza  
Stratford-upon-Avon**

### Welcome to OH2018

Occupational Hygiene 2018 is the leading international conference in the field of worker health protection in the UK, focussing on occupational hygiene and the prevention of occupational ill-health and disease.

Following on from the success of OH2017 which brought together a global audience of over 330 delegates, BOHS will once again be delivering an exciting programme which combines inspiring and thought-leading plenary sessions with scientific and technical sessions as well as a range of interactive workshops and case studies.

The conference will bring together researchers, practitioners, regulators and other experts from around the world to discuss the very latest in issues that affect health at work.

The location for this conference is Stratford-upon-Avon, a historic town in the heart of England, and the birthplace of William Shakespeare.

See overleaf for more details.

**Submit your abstract online at [www.oh-2018.com](http://www.oh-2018.com)**

**For further information visit [www.oh-2018.com](http://www.oh-2018.com) or email [conferences@bohs.org](mailto:conferences@bohs.org)**



## STRATFORD- UPON-AVON

The Premier Conference for  
Occupational Hygiene in the UK

16-19 April 2018

Crowne Plaza  
Stratford-upon-Avon

We welcome papers on any aspect of occupational hygiene, worker health protection and occupational / environmental health but are especially keen to see papers covering topics in the following areas:

- **Occupational hygiene/health good practice**  
Practical workplace experiences  
Methods to assess and control risk
- **Physical agents**
- **Risk management strategies**
- **Human factors and behavioural science**
- **Controls**
- **Exposure science**
- **Future workplace hazards and emerging risks**
- **Chemical safety**  
Regulation & product stewardship  
Emergency/Incident management
- **Ergonomics and MSDs**
- **Legal compliance and best practice**  
(Regulations, ACOPs and standards)
- **EMF case studies**

### Types of submissions



#### Workshops

Designed to be interactive with a good degree of audience participation, workshops provide an ideal opportunity to discuss emerging hygiene issues and/or develop participants' skills. Those willing to initiate and facilitate a workshop are encouraged to submit an outline proposal via the abstracts submission process using the Workshop Submission Form. Usually 75-90 minutes.

**Submission deadline**  
13 October 2017



#### Practical Experiences in the Workplace/ Case Studies

Usually 10 minutes plus limited time for questions. Intended to be short, informal talks illustrating real world problems and how they were solved.

**Submission deadline**  
13 October 2017



#### Platform Technical Presentations

Professional practice or scientific research based presentations. Usually 15-20 minutes plus limited time for questions.

**Submission deadline**  
13 October 2017



#### Scientific Posters

Posters are especially suited to reporting small studies, preliminary findings or projects with large data sets that are difficult to display in oral presentations. Posters must be on display for the duration of the conference.

**Submission deadline**  
28 February 2018



#### IGNITE

Not for the faint hearted; IGNITE gives presenters the opportunity to deliver a 5 minute session on any suitable topic with a slide deck of 20 slides that auto advance every 15 seconds. The results are memorable.

**Submission deadline**  
28 February 2018

**Submit your abstract online at [www.oh-2018.com](http://www.oh-2018.com)**

For further information visit [www.oh-2018.com](http://www.oh-2018.com) or email [conferences@bohs.org](mailto:conferences@bohs.org)

### Speaker concessions

BOHS will continue to offer speakers and poster presenters one free day's attendance at the conference. If one or more of your submissions are successful, you will be entitled to the following:

**Free attendance on the day you are presenting\***

**OR**

**If you wish to attend the full conference we have a discounted rate specifically for speakers, bookable from August via the website.**

### EARN EXTRA CPD POINTS

Remember, all presenters are entitled to an extra two CPD points, in addition to those gained from attending the conference as a delegate.

# SAIOH awarded W201 accreditation

The Southern African Institute for Occupational Hygiene will be able to act as an examiner for a key training module and has also progressed with its teaching on asbestos work.

The Southern African Institute for Occupational Hygiene (SAIOH) has been formally awarded accreditation to act as an examiner for the W201 Basic Principles of Occupational Hygiene module of the Occupational Hygiene Training Association (OHTA). It has also announced developments in its teaching on asbestos work and revealed some details of its annual conference in October.

SAIOH described the accreditation as “a remarkable opportunity” for itself, its administrators and the members of its Professional Certification Committee (PCC) “to show that SAIOH can successfully run the examinations according to OHTA requirements, with strict quality assurance and the high standard of SAIOH’s questions and model answers”. Any southern Africa-based approved training provider (ATP) may now order the required examination papers at a reduced price directly from the PCC administrator.

Meanwhile, Julie Hills, a registered occupational hygienist and SAIOH vice-president for 2017, has received accreditation from the British Occupational Hygiene Society (BOHS) to teach the modules related to asbestos work, as part of her involvement in the development of a South Africa-based asbestos counting proficiency scheme.

The first module which will be offered to occupational hygienists in southern Africa is ‘IP403 – Counting of asbestos fibres’. This will be followed in due course by three more:

- IP402 - Surveying and sampling strategies for asbestos in buildings;
- IP404 - Air monitoring, clearance inspections and reoccupation following the removal of asbestos; and
- IP405 - Management of asbestos in buildings.

In the UK, these four modules build into an advanced qualification where occupational hygiene practitioners can eventually attain registration as certified asbestos analysts (CAA). BOHS is currently modifying a fifth module on bulk analysis for the international market.

Since each module greatly elevates the knowledge and practice in all aspects of asbestos management and analysis, SAIOH said that

it anticipates that the introduction of this type of training “will contribute substantially to capacity and skills building in asbestos proficiency counting in the southern African region, at a competitive cost”.

Peter-John Jacobs, a co-opted SAIOH council member and its representative at the International Occupational Hygiene Association (IOHA), attended the IOHA board meeting in Seattle on 3 June in his capacity as a board member. He also attended the OHTA AGM on the same day. SAIOH has a working partnership with OHTA, which it says benefits the professional development of its members.

The two meetings, which had representatives from more than 15 member associations in attendance, were held in conjunction with AIHce 2017, the Annual Conference and Exposition of the American Industrial Hygiene Association (AIHA), with whom SAIOH has a current memorandum of understanding. SAIOH continues to be called upon to play a prominent role internationally and especially in Africa, where a number of its members serve as occupational hygiene practitioners.

## Annual conference

SAIOH’s annual conference takes place on 25-27 October at the Misty Hills Country Hotel and Conference Venue, in South Africa’s Gauteng province. This is within the ‘Cradle of Humankind’ World Heritage Site, one of eight in the country. The region has more preserved hominin fossils than any other site in the world, thanks to the preservation conditions of its dolomitic limestone ridges. There are 15 fossil sites in the core area, which is also home to a diversity of birds, animals and plants, some of which are rare or endangered.

In keeping with the conference theme – ‘Occupational hygiene: Building bridges beyond borders’, SAIOH is in the process of developing a programme, which includes three international keynote presenters:

- Marianne Levitsky, president of Workplace Health Without Borders and occupational hygienist and senior associate at ECOH Management in Canada, on ‘Workplace health and the global hygiene community’;
- Eric Esswein, senior occupational hygienist, National Institute for Occupational Safety and Health (NIOSH) in the USA, on ‘Decision-making in the midst of uncertainty: An occupational hygienist responding to bioterrorism, SARS and ebola’;
- Jérôme Lavoué, associate professor, Department of Environmental and Occupational Health, University of Montreal, Canada, on ‘Exposure statistics’.

There will also be four pre-conference professional development courses:

- Global Health, Community and Culture, presented by Marianne Levitsky;
- Determining Worker Exposure Risks in Modern Oil and Gas Extraction: Implications for the Karoo?, presented by Eric Esswein;
- Occupational Radon Exposure Management Systems and Mitigation Challenges for the Construction Sector and beyond, presented by Ryno Botha, CEO and co-founder, CareTac; and
- Evaluating the Effectiveness of an Industrial Ventilation System to Ensure Airborne Pollutant Exposure Compliance, presented by Johan Snyman, BBE Consulting.

In addition, the conference features:

- Invited regional and national presenters;
- A session dedicated to the New Partnership for Africa's Development (NEPAD);
- A session dedicated to 'All things certification', presented by members of SAIOH's PCC;
- Sessions dedicated to stakeholders and sister organisations in occupational health, and to student presentations; and
- Free paper sessions with both oral (limited slots available) and poster presentations.

Please access the SAIOH website for more information, updates and online registration: [www.saioh.co.za](http://www.saioh.co.za)

### SAIOH membership by category, gender and location (July 2017)

Occupational hygiene category	Female		Male	
	n	%	n	%
<b>Occupational hygiene assistant (OHA)</b>				
South Africa	290	53	261	47
Botswana	3		5	
Namibia	1		3	
Tanzania	0		1	
<b>Occupational hygiene technologist (OHT)</b>				
South Africa	87	43	114	57
Botswana	3		3	
Namibia	2		1	
Australia	0		1	
New Zealand	1		0	
<b>Occupational hygienist (OH)</b>				
South Africa	50	26	141	74
Botswana	1		0	
Namibia	0		2	
USA	0		1	
<b>Sub-total</b>	<b>438</b>	<b>45</b>	<b>533</b>	<b>55</b>

*In addition to the above, there is another category which is growing substantially:*

<b>Registered occupational hygiene assistant (student)</b>				
South Africa	54	68	25	32
<b>Total SAIOH membership</b>	<b>492</b>	<b>47</b>	<b>558</b>	<b>53</b>

# Turning the tide on occupational disease

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**Death and illness caused by occupational diseases are on the increase. Jukka Takala, co-author of the latest ILO data report, tells GEM that a more aspirational vision is needed.**

Recent figures reported by the International Labour Organisation (ILO) indicate that fatal work-related diseases jumped by 20% in the first half of this decade, rising from 2 million in 2010 to 2.4 million in 2015. In total, the report, 'Global estimates of occupational accidents and work-related illnesses', estimates that over 7,500 people die every day because of their work: 1,000 from occupational accidents and 6,500 from work-related diseases.

Respiratory diseases are blamed for the lion's share of the increase. Further, data from Asia indicates that the region now contributes to 65% of all work-related mortality, compared with figures of around 10% for the Americas, Europe and Africa.

Noting that respiratory diseases are now the third largest cause of fatal work-related diseases, after circulatory diseases and malignant neoplasms, the report calls for a new paradigm to be adopted to tackle vapours, gases, dusts and fumes, which are the major cause of chronic obstructive pulmonary disease (COPD) and asthma.

Other factors include exposure to coal mine dust, asbestos, silica, external tobacco smoke at work, welding and cutting gases and fumes, cement dust, diesel exhausts, spray painting, organic solvents and possibly man-made mineral fibres. The report adds that preventive measures should be taken to reduce exposures in the workplace to such gases, which it says are often under-regulated.

## Preventive action needed

Jukka Takala, a senior consultant to the Singapore Ministry of Manpower's Workplace Safety and Health Institute and president of the International Commission on Occupational Health (IcoH), co-authored the ILO report.

He believes in being proactive and preventing occupational disease, rather than dealing with the results of occupational injury or illness. This is a key theme for IcoH, which adopted a statement that every workplace should include occupational health services at its triennial meeting in Seoul in 2015.

Dr Takala says words are being turned into actions, with examples in China – where the Ministry of Health is supporting training in rural communities, and Bangalore, where the local association of occupational health is planning to carry out local training. In Singapore, meanwhile, the Ministry of Manpower has adopted a Vision Zero, which entails:

- identifying leaders who can bring about a change in mindset;
- developing performance measures to track progress and facilitate regular reviews;
- providing a compelling case, to ensure support and continued buy-in from industry; and
- clearly communicating the benefits of the approach from a moral and economic standpoint.

However, he is frustrated by a lack of vision at the international level – citing the World Health Organisation (WHO) that 93% of spending globally is on treating illnesses and just 7% on preventing them.

## Ambitious targets

While the ILO promoted a framework for safety and health, in establishing a convention in 2006 with a toolbox of measures, Dr Takala would like to see specific ambitious targets set to eliminate occupational cancers. "These cancers are man-made, they are not caused by nature. If you use chemicals and dusts in a safe way, the cancers are entirely preventable," he says.

Even though millions of workers suffer from occupational diseases, Dr Takala says that WHO and the ILO appear to give low priority to the issue, and are reluctant to use words like 'eliminate' for diseases like cancer. This, he believes, is partly because of experience.

He notes that, back in 2003, WHO and ILO agreed on a joint statement to eliminate disease caused by asbestos exposure. There has been little progress on this because of the continued support of the industry by key asbestos-producing countries (see box). "But if you don't try, what will happen?" he asks.

Dr Takala is hopeful that the EU could provide impetus – referring to recently announced initiatives by the European Commission and its Roadmap on Carcinogens. Several organisations are involved in the voluntary scheme – which initially runs for three years – to raise awareness about the risks arising from exposure to carcinogens in the workplace and exchange good practices.

Similarly, he says, the US has had some success in tackling silica dust. He also notes that the UK's Institution of Occupational Health (Iosh), supported by the Health & Safety Executive (HSE), has a programme called 'No time to lose – to eliminate cancer' which could play an important role, especially in countries where English is understood and there are active promoters of such a programme. These activities provide models for others, he says.

Another important area for IcoH is the ethical component of occupational health. Originally, it was dominated by medical and health practitioners, who still make up a large portion of its membership. Dr Takala says they face difficult questions like: What should they do if they find companies behaving badly? How should they respond to rectify problems?

Richer countries have a lot at their disposal and people should know about the issue, and if they do not they should be educated in school, in his view. "People should think about these issues when they buy their food and clothes. They should know that some companies gain from breaking 'the rules'." He notes that some progress has been made on this front, with better education and initiatives in areas such as child labour and fair trade.

## Magnitude of the problem

Dr Takala says that IcoH has a good reputation, is well trusted and has some influence among decision makers, but he believes it must do more to demonstrate the magnitude of the problem and identify partners and establish coalitions, such as with UN bodies. "People tend not to be afraid of activities they do every day, and as well as this familiarity breeding confidence, many people are concerned they may lose their jobs if they question workplace practices," he says.

He notes that another trend in employment – that of outsourcing production – means that many people work in unregulated, unmonitored environments. He has seen people working with open drums of adhesives, based on xylene and benzene solvents, in home-based micro enterprises, alongside their children, gluing soles to sport shoes in Asian countries.

The latest ILO data gives an idea of the scale of the problem of occupational cancers and other workplace-related diseases. But, Dr Takala says, further progress is needed in terms of measuring exposures in the workplace. "It is complex, you need to know what to measure, where, and link that to an effect. The National Institute for Occupational Safety and Health (Niosh) in the US has made a fair amount of guidance materials in this area."

## Stronger regulation and investment

In addition, a strong regulatory framework and enforcement is needed, Dr Takala says. He notes that increasingly regulators are talking about chemicals, and are taking sound management seriously. In Asia, Japan, Singapore, South Korea and Taiwan have taken a lead; others, including China, are catching up.

For some developing economies, basic needs such as food and livelihood are often a higher priority, because of poverty. "Some

people say there is a conflict between industrialisation and strong occupational safety regulation. But strong regulation never killed anyone," he says.

The present highly developed and industrialised countries have all taken safety and health at work seriously, and this contributes to their achieving success. In his view, countries with emerging economies should see this as essential to their development rather than an optional extra.

Dr Takala also believes that industry could spend more to improve health and safety standards. This, in his view, is particularly important when you consider the number of people becoming sick from exposure to hazardous chemicals. If 800,000 people die each year from this, he estimates millions becoming ill from occupational diseases caused by exposures to substances that cause cancer, or asthma or other hazardous materials and processes.

"This creates a problem over the longer term as people will be less able to work throughout their whole expected working career and will need medical treatment. This creates the bulk of the cost of occupational disease."

This creates a problem over the longer term as people will be less able to work throughout their whole expected working career and will need medical treatment. This creates the bulk of the cost of occupational disease.

### WHO action on asbestos

Currently about 125 million people around the world are exposed to asbestos at the workplace. In 2004, asbestos-related lung cancer, mesothelioma and asbestosis from occupational exposures were estimated to result in 107,000 deaths and 1.5 million disability-adjusted life years. Actions to elimination of asbestos-related diseases include:

- recognising that the most efficient way to eliminate asbestos-related diseases is to stop the use of all types of asbestos;
- replacing asbestos with safer substitutes and developing economic and technological mechanisms to stimulate its replacement;
- taking measures to prevent exposure to asbestos in place and during asbestos removal; and
- improving early diagnosis, treatment, social and medical rehabilitation of asbestos-related diseases and establish registries of people with past and/or current exposures to asbestos.

# Styrene exposure: Q&A with Niosh

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## Chemical Risk Manager speaks to Niosh's Dr Randall Nett about his work on the link between work-related styrene exposure and lung disease.

Researchers at the National Institute for Occupational Safety and Health (Niosh) in the US recently carried out a report on the link between work-related styrene exposure and lung disease. They were led by Dr Randall Nett, a medical officer in Niosh's Respiratory Health division. The results, which have been published in the *American Journal of Industrial Medicine*, established that there is indeed a link between work-related styrene exposure and lung disease. Chemical Risk Manager (CRM) asked Dr Nett some questions about his work.

### **CRM: How is styrene mainly used and can it be substituted?**

**Dr Nett:** Styrene is the monomer for polystyrene. It is widely used in the production of strong, lightweight products that are commonly used in daily life, in areas such as packaging, construction, transportation, household and energy. Examples include the reinforced plastics used in boats and tanks, automobile body putty, food containers, tyres, wind power turbines, synthetic marble flooring, pipes and foams. In some instances, other chemicals can be substituted for styrene, but this depends on

the individual product and manufacturing process. We do not have information about the costs of styrene or possible styrene substitutes.

### **CRM: What health hazards are already associated with styrene?**

**Dr Nett:** The International Agency for Research on Cancer classifies styrene as possibly carcinogenic to humans. In addition, currently available epidemiologic studies demonstrate that styrene is probably associated with non-malignant respiratory diseases. These include asthma and obliterative bronchiolitis, a rare and irreversible severe lung disease which causes scar tissue and inflammation in the small airways, eventually making breathing difficult. Finally, styrene has been associated with various other health effects, including changes in colour vision, mucus membrane irritation, hearing loss and neurocognitive impairment.

### **CRM: What are the regulatory considerations, nationally and internationally?**

**Dr Nett:** The Occupational Safety and Health Agency (Osha) established a permissible exposure limit of 100ppm over an eight-hour time weighted average (TWA). Niosh itself has a recommended exposure limit (REL) of 50ppm over an eight-



hour TWA, while the American Conference of Governmental Industrial Hygienists has a threshold limit value of 20ppm over an eight-hour TWA. Because Niosh does not create or enforce US regulations for occupational exposure limits to styrene, we suggest contacting Osha for questions regarding any pertinent regulations.

**CRM: On what basis was your study carried out?**

**Dr Nett:** In the US, an estimated 90,000 workers are exposed to styrene. Previously published case reports described workers who became ill with non-malignant respiratory diseases following relatively short-term exposures. Based on these reports, we suspected that occupational exposure to styrene could be associated with non-malignant respiratory diseases, but we wanted to learn more. We conducted a systematic literature review, covering 55 scientific papers that described either a case of illness related to styrene exposure, a study of the respiratory health effects of a group of workers exposed to styrene or a study investigating the causes of death of workers exposed to styrene. We also included two additional case reports of respiratory illnesses that had not previously been published in the scientific literature.

**CRM: What were your key findings?**

**Dr Nett:** After we compiled all the evidence and completed our analysis, we concluded that occupational exposure to styrene is a potential risk factor for non-malignant respiratory disease. Other than the two newly described case reports, this paper was reporting information already available to the scientific and medical community in the published literature. However, our manuscript was the first summary and comprehensive analysis of all the published evidence.

**CRM: What other findings would you highlight?**

**Dr Nett:** It is also notable that our review demonstrated that workers who became ill with a respiratory disease developed their first respiratory symptoms on average only ten months after their first exposure to styrene. This means that, unlike cancer, respiratory disease can occur in workers after short-term exposures, particularly when they are exposed to high concentrations of styrene. A limitation of the analysis is that the workers included in these studies were exposed to other chemicals in the workplace, which might have contributed to the development of respiratory disease-related outcomes. Additional animal and epidemiologic studies are needed to further describe the risk of respiratory disease for workers exposed to styrene.

**CRM: Is it possible for workers to use styrene safely?**

**Dr Nett:** Whilst we concluded through our review of the scientific literature that styrene is a potential risk factor for the development of non-malignant respiratory disease, we still have much to learn about this risk. The Niosh REL was primarily based on reports of effects on the human nervous system and

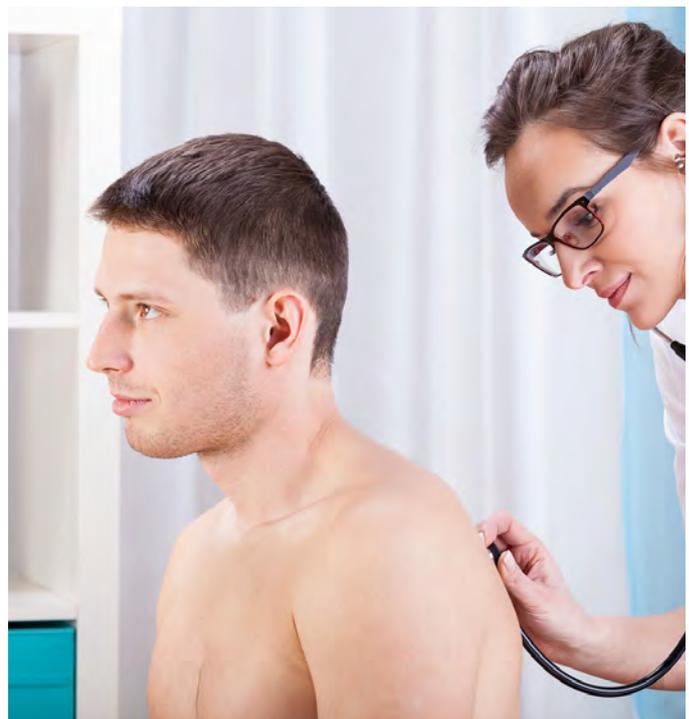
irritation of the eyes and of the respiratory system, not on reports of non-malignant respiratory disease. For this reason, further epidemiologic and animal studies will be critical to learning more about worker safety with respect to the risk of non-malignant respiratory disease and particular levels of styrene exposure.

**CRM: Is it right to take a similar approach to California's Office of Environmental Health Hazard Assessment, which adopted a Proposition 65 no significant risk level for styrene of 27 micrograms/day (µg/day) over an eight-hour work day?**

**Dr Nett:** This is lower than the levels argued for by the Styrene Information and Research Centre of 2,100µg/day for inhalation exposure and 5,600µg/day for oral exposure. Until we learn more, we cannot comment on the risk for workers developing non-malignant respiratory disease at particular exposure levels.

**CRM: What are the best practice ways for workers to use styrene?**

**Dr Nett:** Controlling occupational exposures to styrene is the fundamental method of protecting workers. The preferred method for achieving this are limitation of styrene exposure followed by the substitution of styrene for a safer alternative. However, the former might be difficult for employers to implement. In this instance, implementing engineering controls would be the next preferred method. While engineering controls can be initially costly, they provide protection independent of worker interactions. If these methods do not adequately protect workers from styrene exposure, then the use of administrative controls and personal protective equipment is recommended.



## News from:

# Chemical Risk Manager

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### ILO calls for global forum to tackle occupational diseases

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*5 September 2017*

The International Labour Organisation (ILO) has stated that 2.4m deaths each year are caused by occupational diseases globally – over 85% of all work-related mortalities. The estimated costs of these illnesses and injuries represent almost 4% of global GDP, nearly \$3tn.

Speaking at the XXI World Congress on Safety and Health at Work in Singapore, ILO director-general Guy Ryder said that the new figures point to a growing body of evidence, demonstrating the global cost of failing to adequately address existing and emerging occupational safety and health (OSH) concerns and its importance to sustainable development.

“Clearly there is a recognition that certain OSH challenges are global and require global solutions,” said Mr Ryder, adding that the ILO was ready to help form a global coalition with key partners to meet the challenge. The Finnish social affairs and health minister, Pirkko Mattila, proposed a forum to steer the future of work. Important issues included:

- the need for reliable OSH data;
- creating mechanisms for exchange of the data;
- improving OSH in global supply chains;
- knowledge and expertise globally; and
- fostering proactive OSH compliance strategies at national level.

*Further information:*

[www.chemicalwatch.com/crmhub/58467](http://www.chemicalwatch.com/crmhub/58467)

### Nics updates rules for contingency substance list chemicals

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*5 September 2017*

South Korea’s National Institute of Chemical Safety (Nics) has announced changes to the rules on the use of personal protective equipment (PPE) by hazardous substances handlers, under the Chemical Substances Control Act (CCL).

The aim of the amendments is to ensure clear guidelines on PPE, its safety and use on-site. They were made in accordance with a partial amendment announced on 30 May, when 28 substances were added to a list of ‘contingency substances’, bringing the total to 97. Facilities handling such substances must report any accidents to the authorities within 15 minutes of it taking place.

The latest changes include:

- additional guidelines for types of PPE;
- safety standards for each substance, including the 28 recently added;
- further improvement of the types of standard for PPE for each contingency substance; and
- improvement of exemption rules for equipment use, based on considerations of onsite safety and suitability.

Public consultation ran until 11 September, with the proposed changes taking effect on 1 January 2018.

*Further Information*

[www.chemicalwatch.com/crmhub/58471](http://www.chemicalwatch.com/crmhub/58471)

## Swedish scientists link noxious substance exposures to increased arthritis risk

30 August 2017

Noxious airborne substances are the main suspects in a threefold increase in the rheumatoid arthritis risk for male bricklayers or concrete workers, according to a recent study by researchers at the Karolinska Institute in Stockholm. The research considered 3,522 cases and 5,580 controls and looked at men and women separately. The report is published in *Arthritis Care and Research*.

Silica, mineral oil, asbestos, pesticides and textile dusts may be implicated in a similar mechanism to smoking, with the strongest recognised environmental exposure leading to joint inflammation and damage. Organic solvents, metal fragments and motor exhaust also pose a potential risk. There were elevated risks for men working as material handling operators and in electrical and electronic occupations.

*Further Information*

[www.chemicalwatch.com/crmhub/58278](http://www.chemicalwatch.com/crmhub/58278)

## Niosh consults on ten-year research agenda

30 August 2017

Consultation has begun in the US and will run until 23 October on a research agenda for the National Institute for Occupational Safety and Health (Niosh) from 2016 to 2026. The National Occupational Research Agenda (Nora) Manufacturing Sector Council, Niosh's stakeholder and research partnership programme, developed a document to set the parameters for research, information and action to prevent occupational injuries, illnesses and fatalities.

According to this document, silica dust, cancer and neurological illnesses are central to the OSH research needs of industry for the next decade. Particular noxious substances and linked health risks highlighted include:

- dust-related lung diseases;
- nanomaterials;
- chemicals, generally;
- respiratory diseases;
- occupational cancer;
- cardiovascular disease;
- neurological diseases; and
- reproductive damage.

These “contribute greatly to debilitating acute and chronic conditions in the manufacturing industry,” the document said. Other concerns focus on asthma, beryllium, respirable silica, elongated mineral particles, heavy metals and organic solvents.

Welding is an occupation singled out for its associated risks. These include manganese fumes that may lead to a Parkinsonian syndrome known as ‘manganism’, as well as lead, iron, carbon

monoxide and heat stress exposure, which can contribute to other neurological impairments.

The authors added: “Given the changes in the manufacturing sector around new technologies and employment arrangements, new knowledge is needed to prevent illnesses, injuries and fatalities. While many workplaces comply with legal or obligatory requirements and implement recommended interventions, few publications exist documenting the long-term effectiveness of these actions.”

*Further Information*

[www.chemicalwatch.com/crmhub/58373](http://www.chemicalwatch.com/crmhub/58373)

## Bisphenol A: Dutch experts call for new OEL

28 July 2017

A Dutch expert committee has provisionally recommended that its government implement a new national occupational exposure limit (OEL) for bisphenol A (BPA), which is commonly used in polycarbonate, epoxy resins and thermal paper for till and credit card terminal rolls.

Current Dutch OELs for BPA are 2mg/m<sup>3</sup> for the inhalable fraction and 5mg/m<sup>3</sup> for the respirable fraction, both as an eight-hour time-weighted average (TWA). The new draft proposal from the Dutch Expert Committee on Occupational Safety recommends an OEL of 2.5µg/m<sup>3</sup> (0.0025mg/m<sup>3</sup>), as well as a skin notation.

The committee took account of the possibility of low-dose harm to the liver, kidneys and mammary glands, as well as the reproductive, metabolic, neuro-behavioural and immune systems. It could not find enough evidence to form a reliable basis on which to support a health-based recommended OEL. Based on the possibility of significant harm, however, it suggested taking a ‘pragmatic’ approach.

The EU has set an indicative OEL for inhalable BPA dust of 10mg/m<sup>3</sup>. However, this is not mandatory and national OELs vary from one member state to another - for inhalable fractions, they range from 3 to 10 mg/m<sup>3</sup> as an eight-hour TWA. In 2014, the European Commission's Scientific Committee on OELs recommended an inhalable fraction OEL of 2mg/m<sup>3</sup> as an eight-hour TWA.

*Further Information*

[www.chemicalwatch.com/crmhub/57855](http://www.chemicalwatch.com/crmhub/57855)

## Exposure to workplace CNTs assessed with ‘most suitable’ approach

25 July 2017

The most suitable way of assessing exposure to carbon nanotubes in the workplace is a combination of carbon analysis and scanning electron microscopy (SEM), research has shown.

The research team comprised scientists from:

- the Netherlands Organisation for Applied Research;
- the Dutch Institute for Risk Assessment Sciences;
- the University of Leuven in Belgium;
- Belgian occupational health specialist Idewe; and
- the US National Cancer Institute.

They collected personal breathing zone samples from workers at a company producing commercial multi-walled carbon nanotubes. They used Institute of Occupational Medicine inhalable dust samplers to capture the inhalable size fraction. The samples were analysed with carbon analysis, inductively coupled plasma mass spectrometry and SEM with energy dispersive X-ray spectroscopy.

The research was funded by NanoNextNL, a €250m public-private partnership between the government and a consortium of over 100 companies, universities and institutes. It has been published in the journal *Annals of Work Exposures and Health*.

#### Further Information

[www.chemicalwatch.com/crmhub/57859](http://www.chemicalwatch.com/crmhub/57859)

## European Commission to assess reprotoxins after workplace law deal

18 July 2017

The European Commission has called on the European Parliament and Council of Ministers to introduce stricter controls in the wake of their landmark agreement on a carcinogens and mutagens Directive (CMD) proposal. The Commission has been seeking a consistent framework for carcinogens for a long time and promised robust measures in May.

In June, the Council and Parliament reached a provisional agreement on proposals to update the CMD. This requires the Commission to assess the possibility of including reprotoxic substances in the scope of the CMD by Q1 2019, and may, as a result, present a legislative proposal.

Two updates to the Directive are progressing through the the EU institutions currently. The agreement covers the first update (CMD1), which sets OELs for 11 substances:

- respirable crystalline silica dust;
- certain chromium (VI) compounds;
- some refractory ceramic fibres;
- 1,2-epoxypropane;
- 1,3-butadiene;
- 2 nitropropane;
- acrylamide;
- bromoethylene;
- ethylene oxide;
- Hydrazine; and
- O-toluidine;

CMD 1 also revises the limits for vinyl chloride monomer and hardwood dusts in the light of more recent scientific data. A plenary vote on CMD1 in Parliament has yet to be scheduled.

The Commission has called on Council and Parliament to reach a swift agreement on a second proposal (CMD2), covering a further seven priority chemicals which were identified through the consultation process in January:

- mineral oils used in internal combustion engines;
- certain polycyclic aromatic hydrocarbon mixtures;
- trichloroethylene;
- 4,4'- methylenedianiline;
- epichlorohydrin;
- ethylene dibromide; and
- ethylene dichloride.

In June, the Employment, Social Policy, Health and Consumer Affairs Council agreed a package of measures on CMD2, concerning substitution, stricter limit values and updating these when new scientific knowledge emerges. The Commission also intends to present a proposal for the next set of chemicals early in 2018.

#### For more information:

<https://chemicalwatch.com/crmhub/57674>

<https://chemicalwatch.com/crmhub/57262>

## Technology exposing lung cells to nanoparticles could be used in workplace

11 July 2017

A system allowing researchers to test how airborne nanoparticles affect human cells *in vitro* could be used to study occupational exposure. Researchers from the Paris Lodron University of Salzburg (PLUS) and the Flemish Institute for Technological Research developed the so-called Navetta system to study how living cells respond to engineered nanoparticles in the air.

A gas stream carries the nanoparticles over cells in an exposure chamber. An electrostatic field ensures that the particles deposit evenly, while reporter cells show adverse effects. Depositing particles into cells directly from the gas phase is thought to provide more realistic exposure conditions than traditional 'wet' *in vitro* approaches.

"The device is intended to provide data on safety of airborne particles, which is in principle also of high relevance for occupational exposure," said Albert Duschl of PLUS. The teams have applied for a patent on Navetta to enable future commercial development of the system. However, there are no concrete plans for a spin-out yet. The technology is described in the journal *Environmental Science and Technology*.

#### For more information

[www.chemicalwatch.com/crmhub/57488](http://www.chemicalwatch.com/crmhub/57488)

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