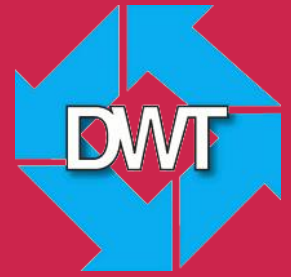
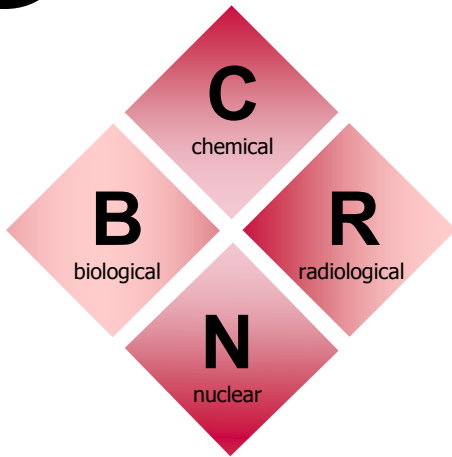




Federal Ministry
of Defence



3rd International Symposium on Development of CBRN Defence Capabilities 19th - 21st October 2015, Berlin



Programme

as of October 13th, 2015

Conference Language is ENGLISH



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19th October 2015
Julius Leber Barracks
Kurt-Schumacher-Damm 41
13405 Berlin

Conference & Exhibition

20th - 21st October 2015
Maritim Hotel proArte,
Friedrichstraße 151
10117 Berlin

3rd International Symposium on Development of CBRN Defence Capabilities

Main Programme on Tuesday, 20th October 2015

- 07:30 Registration opens
- 08:00 **Opening of the Exhibition**
Welcome Coffee, Dialogue with the Exhibitors
- 08:45 **Opening of the Conference**
Major General (ret.) Wolfgang Döring, Managing Director of DWT, DEU
Colonel Hans-Christian Hettfleisch, Conference Chair, MoD, DEU
- 09:00 **Key Note Politics**
Dr. Katrin Suder, State Secretary, MoD, DEU
- 09:20 **Political Opening Session**
Introduction in the Conference
MajorGeneral Eberhard Zorn, Director Forces Policy FüSK, MoD, DEU
The Global Threat of Weapons of Mass Destruction — Demonstrated on Hand of the Chemical Weapons Risk
Ahmet Üzümcü, Director General,
Organisation for the Prohibition of Chemical Weapons (OPCW)
The Future of Weapons of Mass Destruction
John P. Caves Jr., Deputy Director, WMDC, National Defence University, USA
The Importance of Multilateral Cooperation in Preventing CBRN Attacks and Incidents
Dr. Oliver Meier, International Security Division, German Institute for International and Security Affairs (SWP), DEU
Capability Driven Collaboration – Exploiting Synergies
Sebastian Meyer-Plath, President Bruker Detection Division
- 11:00 **Discussion Round: Current Threats of Proliferation of WMD – Consequences for the International Community**
Chair:
Dr. Jamie Shea, Deputy Assistant Secretary General, NATO
Speakers:
MajorGeneral Eberhard Zorn, Director Forces Policy FüSK, MoD
Ahmet Üzümcü, Director General OPCW
John P. Caves Jr., Deputy Director, WMDC/NDU
Dr. Oliver Meier, German Institute for International and Security Affairs
- 11:45 Luncheon / Dialogue with the Exhibitors

Session 1: Chemical Threats

- 13:30 **Chair and Introduction: VLR'in Susanne Welter**,
Head of Division Biological and Chemical Weapons Issues, Federal Foreign Office, DEU
- 13:40 **The Global Threat of Chemical Weapons**
Philippe Dernier, Head of Unit Verification,
Organisation for the Prohibition of Chemical Weapons (OPCW)
- 14:00 **The Political Planning Process for Rapid International Interventions**
Rebecca Hersman, Center for Strategic and International Studies, Washington, USA
- 14:20 **Experiences from Operation RECSYR**
Commander John G. Refsnes, Norwegian Navy, NOR

Session 2: Epidemics

- 14:40 **Chair and Introduction:**
LtCol MD Professor Dr. Lothar Zöller,
Bundeswehr Institute for Microbiology, DEU
- 14:50 **The Global Risk of Epidemics**
Dr. Maurizio Barbeschi, GCR Department, World Health Organisation, WHO
- 15:10 **Lessons Learned from the EBOLA Epidemic**
Wolfgang Rudischhauser, Director WMD Non-Proliferation Centre, NATO HQ
- 15:30 **The Use of the Mobile Laboratory Units in Support of the Ebola Outbreak Response in West Africa**
LtCol MD Dr. Roman Wölfel, Bundeswehr Institute for Microbiology, DEU
- 15:50 **Biological Outbreaks: Containment and Consequence Management**
Dr. Stefano Miorotti, Cristanini, ITA
- 16:10 **Coffee Break / Dialogue with the Exhibitors**

Poster Sessions from 16:15-16:55 during Coffee Break

- 17:00 **Parallel Panel Sessions 1-7**
- Panel 1: Detection, Identification, Monitoring (CHEM)
Panel 2: Detection, Identification, Monitoring (FORENSICS)
Panel 3: Medical CBRN-Countermeasures and Support
Panel 4: Protection and Disinfection in Epidemics
Panel 5: Evaluation / Prognosis / Consultation
Panel 6: Integrated CBRN Detection Solutions
Panel 7: Public-Industrial Cooperation – A View from Industry

- 18:50 **Continuation of the Dialogue at the Evening Reception**





3rd International Symposium on Development of CBRN Defence Capabilities

Main Programme on Wednesday, 21st October 2015

- 07:30 Registration opens
- 08:00 **Opening of the Exhibition**
Welcome Coffee, Dialogue with the Exhibitors
- 08:30 **Introduction Day two and Chair Session 3**
Colonel Hans-Christian Hettfleisch, German MoD, Conference Chair
- Session 3: Nuclear and Radiological Threats**
- 08:40 **Chair and Introduction:**
Wolfgang Rudischhauser, Director WMDC NATO HQ – IS/ESC
3A: Nuclear Terrorism
- 08:50 **Political Assessment of the Threat**
Giorgio Franceschini, Peace Research Institute Frankfurt (PRIF), DEU
- 09:10 **Experiences from a Reference Scenario**
Dr. Mario Burger, Labor Spiez, Switzerland, CHE
3B: Fukushima Daiitschi – Assessment of a Nuclear Disaster
- 09:30 **Experiences and Conclusions**
Colonel Shinji Iwakuma, Vice Superintendent Chemical School, JGSDF, JPN
- 09:50 **Experiences and Conclusions from a National Point of View**
Dr. rer. nat. Horst Miska, Ex-European Commission DG Environment, Ex-Ministry of Interior Rheinland Pfalz, DEU
- 10:10 **The future of CBRN Defence - A system integrator's point of view**
Dr. Bernhard-Christoph Halstrup, Rheinmetall, DEU
- 10:30 **Coffee Break / Dialogue with the Exhibitors**
Poster Sessions from 10:35-11:00 during Coffee Break
- 11:10 **Parallel Panel Sessions 8-13**
- | | |
|-----------|---|
| Panel 8: | Detection, Identification, Monitoring (RAD NUC) |
| Panel 9: | Detection, Identification, Monitoring (BIO) |
| Panel 10: | Decontamination and Disinfection |
| Panel 11: | Individual and Collective Protection |
| Panel 12: | Risk Analysis / Risk Assessment / Scenarios |
| Panel 13: | Education and Training |



12:50 Luncheon / Dialogue with Exhibitors

Session 4: The way ahead in Europe



- 14:00 **Chair and Introduction:**
Colonel Hans-Christian Hettfleisch, MoD, DEU and **Dr. Iris Gnedler**, MoI, DEU
- 14:10 **The EU CBRN Centres of Excellence Initiative**
Ph.D. Bruno Dupré, European External Action Service (EEAS), Policy Coordinator on CBRN Issues
- 14:30 **The EU CBRN AP and R&D Programme**
Dr. Said Abousahl, Head of Unit Nuclear Safety and Security, European Commission - DG JRC
- 14:50 **CBRN Capability Development**
Colonel Henry Neumann, Commander, Bundeswehr CBRN Defence Command
- 15:10 **EDA's CBRN Defence Project - An Opportunity for Industries** (working title)
Gerlof de Wilde, EDA
- 15:30 **The Role of the European Union in the Area of WMD Non-Proliferation**
John Gatt-Rutter, Head of Division Non Proliferation, Disarmament and Arms Export Control, European External Action Service (EEAS)
- 15:50 **Conclusions and Closing Remarks**
Colonel Hans-Christian Hettfleisch, Conference Chair, MoD
Major General (ret.) Wolfgang Döring Managing Director of DWT
- 16:00 End of Conference



Panel Sessions on Tuesday, 20th October 2015

Panel Session 1

Detection, Identification, Monitoring (CHEM)

Chairperson: Major André Althoff, CDSEP School, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Revolutionizing the traditional way of chemical agent decontamination with chemical agent disclosure spray and next generation enzymatic decontamination**
Markus Erbedinger, Ph.D., FLIR Systems, Inc., USA
- 17:30 **Application of an IR standoff detector for estimating surface contamination**
Thomas Wolf, WIS, DEU
- 17:50 **Rugged, Handheld Mass Spectrometry for Priority CWA and TIC Detection**
Dr. Mark L. Norman, 908 Devices Inc., USA
- 18:10 **Surveillance of Chemical Threats by Combining Active and Passive Standoff Detection Systems**
Frank Wilsenack, WIS, DEU
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme

Panel Session 2

Detection, Identification, Monitoring (FORENSICS)

Chairperson: Prof. Dr. Konstantin Karaghiosoff, LMU München, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **CRBN Mixed Samples - Safe Handling and Preparation**
Bärbel Niederwöhrmeier, WIS, DEU
- 17:30 **Hair External Contamination as a Tool for Detection of Individual Contamination after Vapour Exposure to Chemical Warfare Agents Simulants**
Marie Spiandore, Laboratoire de Chimie de l'Environnement, FRA
- 17:50 **C-IED/CBRN Exploitation: Procedures for Sampling of Potentially Contaminated Forensic Samples**
Günter Povoden, BMLVS AT NBC Defence School, AUT
- 18:10 **Experience of Medical Forensics in Poisoning Cases and Possible Relevance for CBW Investigative Mechanisms**
Dr. John Hart, SIPRI, SWE
Dr. Sadik Toprak, University of Zonguldak, TUR
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme

Panel Session 3

Medical CBRN Countermeasures and Support

Chairperson: Colonel MD Dr. Matthias Port, Bw Inst. Radiobiology, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Forensic Analysis of Protein Adducts in Plasma as Prove of Exposure to Nerve Agents and Sulphur Mustard: Capabilities of the German Medical Chemical Defence Program**
PD Dr. rer. nat. Harald John, Bundeswehr Institute of Pharmacology and Toxicology, DEU
- 17:30 **Medical Management of CBRN Casualties from Role 1 to Role 2: A French Perspective**
Colonel MD Prof. Frederic Dorandeu, IRBA, FRA
- 17:50 **A Novel Device for Preventing Acute Radiation Syndrome and Reducing Cumulative Marrow Dose**
PhD Oren Milstein, StemRad Ltd., ISR
- 18:10 **Assessment of Radiation Induced Individual Health Injuries and Prognostic Clinical Evaluation using Integrative "Dosimetry" Strategies**
Colonel MD Dr. Matthias Port, Director Bundeswehr Institute for Radiobiology, DEU
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme

Panel Session 4

Protection and Disinfection in Epidemics - Procedures and Equipment

Chairperson: LtCol MD Dr. Roman Wölfel, Bw MedServiceAcad., DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Protection and Disinfection in Mobile Laboratories – Lessons-learned during the Ebola Outbreak**
LCol Kilian Stöcker, Bundeswehr Institute of Microbiology, DEU
- 17:30 **GIS-Use Cases in Epidemic Situations**
Thomas Gersthofer, ESRI Deutschland GmbH, DEU
- 17:50 **The Challenge of Purifying Extremely CBRN-Contaminated Raw Waters – Water Purification System 'WAA Dekon' of the German Armed Forces**
Dipl.-Ing. Franz Weber, Kärcher Futuretech, DEU
- 18:10 **Room and equipment decontamination using H2O2 vapour (HPV technology)**
N.N., Bundeswehr Hospital Hamburg, DEU
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme



3rd International Symposium on Development of CBRN Defence Capabilities

Panel Sessions on Tuesday, 20th October 2015

Panel Session 5

Evaluation/ Prognosis/ Consultation

Chairperson: LtCol Bernd Allert, BwCBRNDCmd, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Space perspectives and possible tools in support of CBRN issues in local and global scale**
Professor Amnon Ginati, ESA
- 17:30 **The use of standards and Web Services for CBRN Information Management**
Eric Juel Ellinghaus, Bruhn NewTech, DEU
- 17:50 **Situational Awareness for CBRN with Software as a Service (SaaS)**
Andreas Schiel, ESG, DEU
- 18:10 **Applied Knowledge Management in the JCBRN Defence COE – Organizational measures, Semantic Web Technologies and Visualization Tools for a constructive CBRN-KM**
Captain Dietmar Trees, JCBRN Defence COE, CZE
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme

Panel Session 6

Integrated CBRN Detection Solutions

Chairperson: LtCol (res.) Henri Derschum, CDSEP School, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Biological Reconnaissance within the Constraints of both - Analytical Requirements and Legal Limitations**
Dr. Hermann Dreyer, Rheinmetall MAN Military Vehicles, DEU
- 17:30 **Approach to a Total CBRN Commitment**
Peter Wahlén, Saab, SWE
- 17:50 **CBRN Detection Using UGV**
N.N., Cobham Mission Equipment - Unmanned Systems, DEU
- 18:10 **CBRN Reconnaissance – a Dual Use Capability**
Alexander Müller, Bruker Daltonik GmbH, DEU
- 18:30 Discussion / Q&A
- 18:50 Continuation of the Main Programme

Panel Session 7

Public-Industrial Cooperation – A View from Industry

Chairperson: Colonel (R) Wolfgang Widders, DEU

- 17:00 Introduction by the Chairperson
- 17:10 **Mobile, Compact and Reliable CBRN Decontamination Systems for Different Scenarios**
Dr. Patrick Marcus, Kärcher Futuretech GmbH
- 17:35 **Protected Airmobile CBRN Defence**
Dipl.-Ing. Rainer Lutz, Kraus-Maffei Wegmann GmbH & Co.KG
- 18:00 **A Comprehensive Approach to Warning & Reporting for CBRN Incidents**
Computer Scientist Holger Effertz, Technisch-Mathematische Studiengesellschaft mbH
- 18:25 Discussion / Q&A
- 18:50 Continuation of the Main Programme





3rd International Symposium on Development of CBRN Defence Capabilities

Panel Sessions on Wednesday, 21st October 2015

Panel Session 8

Detection, Identification, Monitoring (RAD/NUC)

Chairperson: Dr. Wolfgang Rosenstock, Fhg INT, DEU

- 11:10 Introduction by the Chairperson
- 11:20 **Recent R&D Advances in Modelling and Decision Support Systems at CEA – Examples of Use in the Framework of CBRN-E Exercises**
PhD Patrick Armand, CEA, FRA
- 11:40 **Car-borne Measurements of Radioactive Material**
Monika Risse, Fraunhofer Institute INT, DEU
- 12:00 **LLR Mobile Detection Systems for Gammas and Neutrons with Training/Simulation Capabilities using Realistic Scenarios**
Dr. Jürgen Böttcher, Thermo Fischer, DEU
- 12:20 **Mobile Nuclear Detection Technology: Reducing the illicit Trafficking Haystack**
Dr. Rico Chandrasekharan, Arktis Detectors
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme

Panel Session 9

Detection, Identification, Monitoring (BIO)

Chairperson: Dr. Bärbel Niederwöhrmeier, WIS, DEU

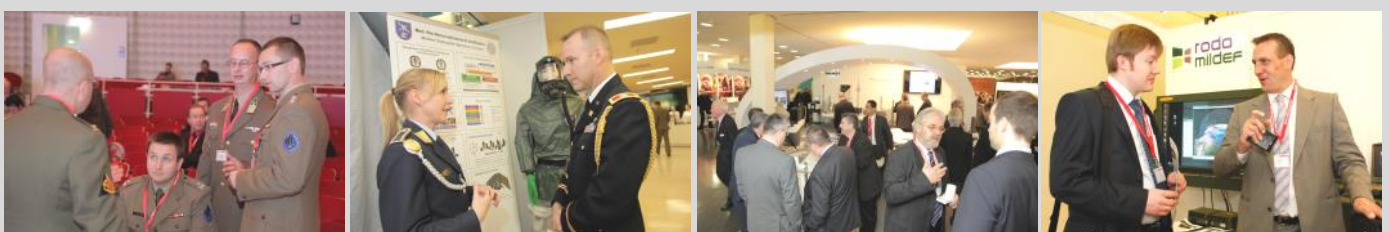
- 11:10 Introduction by the Chairperson
- 11:20 **Field Based Multiplex Detection of Biothreat Agents**
Christopher Pöhlmann, Bruker Daltonik GmbH, DEU
- 11:40 **Rapid, Reliable and Easy On-Site Identification of Biological Threats**
Dr. Sebastian Ziewer-Arndts, analyticon instruments gmbh, DEU
- 12:00 **Rapid and Easy Detection of Biowarfare Agents – A Field Exercise**
Dr. Sybille Pagel-Wieder, miprolab GmbH, DEU
- 12:20 **Hyperspectral Laser Induced Fluorescence as a Method for Standoff Detection and Classification of Biological Hazardous Materials**
Anita Hausmann, DLR, DEU
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme

Panel Session 10

Decontamination and Disinfection

Chairperson: LtCol Johann G. Kappelmeier, BwCBRNDCmd, DEU

- 11:10 Introduction by the Chairperson
- 11:20 **Use of Chlorine Oxidants and Butyldiglycol for Decontamination of Skin, Equipment and Vehicles**
OFAp Dr. Martin Weber, ZI SanDstBw Munster, DEU
- 11:40 **Vacuum Decontamination Chamber - The next Generation**
Dr. Markus Hellmuth, Kärcher Futuretech, DEU
- 12:00 **Gaseous Hydrogen Peroxide Gassing - The Solution for the Inactivation of Fungi and their Spores Inside of Military Vehicles and Tanks**
Udo J. Werner, MBS MaschinenBeratungsService, DEU
- 12:20 **Tailored Systems and Solutions: Decontamination and Disinfection in Military and Civil Scenarios - Challenges and Developments**
Thilo Schuppler, OWR, DEU
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme



Panel Sessions on Wednesday, 21st October 2015

Panel Session 11

Individual and Collective Protection

Chairperson: Dr. Alexander Grabowski, WIS, DEU

- 11:10 Introduction by the Chairperson
- 11:20 **Comprehensive Air Treatment – A Decisive Requirement for Future Collective Protection Systems (COLPRO)**
N.N., Beth-El Industries, ISR
- 11:40 **Solar Light-Activated Photocatalysts and Functionalized Textiles for Self-Decontaminating Individual Protection Against Toxic Agents - "Safe Coat"**
Jan Voigt, WIS, DEU
- 12:00 **Physical Protection for Pilots under NBC-conditions**
Dr. Oliver Burkhardt, Autoflug GmbH, DEU
- 12:20 **Collective Protection – the Swiss Approach**
Daniel Jordi, Labor Spiez, Switzerland, CHE
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme

Panel Session 12

Risk Analysis / Risk Assessment / Scenarios

Chairperson: LtCol Georg Gnan, BwCBRNDCmd, DEU

- 11:10 Introduction by the Chairperson
- 11:20 **Synthetic Biology – The next "Dual Use" Risk**
Dr. rer. nat. Annika Vergin, Bundeswehr Planning Office, DEU
- 11:40 **Fostering Biosafety and Biosecurity in a Changing World: The Toolbox Approach of the German Partnership Program for Excellence in Biological and Health Security**
Joachim von Bonin, GIZ, DEU
- 12:00 **Critical Infrastructure Protection and CBRN – The Forgotten Dimension?**
Martin Neujahr, Bruker Daltonik GmbH, DEU
- 12:20 **Critical Infrastructure for Biosafety and Biosecurity in the Context of Surfaces in Laboratory Buildings**
Dr. Gabriele Bartel-Lingg, Vitmo + Barit GmbH, DEU
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme

Panel Session 13

Education, Training and Exercises

Chairperson: LtCol Dirk Bludau, BwCBRNDCmd, DEU

- 11:10 Introduction by the Chairperson
- 11:20 **Threat Identification and Emergency Response to CBRN Emergencies: TIER**
Ahmadreza Djalali, CRIMEDIM, ITA
- 11:40 **Gap Tool for Evaluation (G.A.T.E.) of CBRNe Drills, Table Top Exercises and Full Scale Exercises**
Dr. Daniele Di Giovanni, University of Rome "Tor Vergata", ITA
- 12:00 **Training in the Detection of Homemade Explosives (HME)**
Dr. Sebastian Wiegmann, CDSEP School, DEU
- 12:20 **Facilities and Support Provided to Help SIBCRA Teams Train Sampling and Identification Techniques and Procedures in (realistic) B Scenarios**
Marina Hagl, CDSEP School, DEU.
- 12:40 Discussion / Q&A
- 12:50 Luncheon / Dialogue with Exhibitors
- 14:00 Continuation of the Main Programme



■ ■ **Poster Sessions on both days of the Conference**

Poster 1

Identification of Biological Warfare Agents as Contaminants in Spices and Herbs
Myriam Kruse, Sylvia Schirmer, Bärbel Niederwöhrmeier, WIS, DEU

Poster 2

On Site Detection of Chemical Contamination on Surfaces via HAPSITE® by Combining SIM with Provisional Swipe Analysis
Captain Gerald Bauer, MSc, BMLVS AT NBC Defence School, AUT

Poster 3

Direct Mass Spectrometric Laboratory Analyses of Low-Volatile Compounds
Björn Klein, Dr. Vanessa Kunde, WIS, DEU

Poster 4

Vapour Pressure Determination of Hazardous Chemical Agents by Simultaneous Thermal Analysis
Dr. Arne Ficks, Dr. Martin Jung, WIS, DEU

Poster 5

A High Performance for Life Support in Mission: Potable Water
Jeldrik Moritz, Sven Fiebing and Elke Reifer, WIS, DEU*

Poster 6

Microemulsions as Adaptable Reaction Media for Decon Agents
Dr. Martin Jung, WIS, DEU

Poster 7

Analytical Estimation of Shelf Life for Reactive Skin Decontamination Lotion (RDSL®)
R. Bogan, B. Klaubert, T. Zimmermann, Bundeswehr Central Medical Service, DEU

Poster 8

Detecting Chemical Warfare Agents using the µRAID™
Franziska Lange, Wolfgang Heller, Thomas Elßner, Bruker Daltonik GmbH, DEU

Poster 9

Catalytic Oxidation and Pressure Swing Adsorption
Friedrich Hesse, Beate Trier, WIS, DEU

Poster 10

Solutions for the Next Generation Permeable CBRN Protective Garments
Karola Hagner, Friedrich Hesse, David Liebscher, WIS, DEU

Poster 11

Zodiac with Mask 2000 and COTS Boots
Friedrich Hesse, Beate Trier, Karola Hagner, WIS, DEU

Poster 12

Oxidative Decomposition Behaviors of Liquid Chemical Warfare Agents on Substrates by Hydrogen Peroxide Vapor and Additional Ammonia Gas
Sam Gon Ryu, Hyun Bae Park; Agency for Defence Development, KOR*

Poster 13

The World of Research Working on CBRNe Problems: Laser Remote Sensing Systems for CWA, TICs and TIMs Detection and Identification
P. Gaudio et al., University of Rome "Tor Vergata", ITA

Poster 14

Gap Tool for Evaluation (G.A.T.E.) of CBRNe Drills, Table Top Exercises and Full Scale Exercises
Dr. Daniele Di Giovanni, et al. University of Rome "Tor Vergata", ITA

Poster 15

A Novel Approach to set up a Quasi Real-Time Biological Agents Detection System
Dr. Orlando Cenciarelli et al., University of Rome "Tor Vergata", ITA

Poster 16

The Importance of a High Level Academic Approach to the CBRNe Problem to improve the Capabilities of Prevention, Management and Evaluation of Consequences
L. Palombi et al., University of Rome "Tor Vergata", ITA

Poster 17

Study on the Adsorption Behaviors of Cyanogen Chloride and Water Vapor by Various Molecular-Organic Frameworks
Hae Wan Lee, Sam Gon Ryu, Agency for Defence Development, KOR*

Poster 18

The Source Attribution of Sarin and Nitrogen Mustard Chemical Agents through Impurity Profiling and Stable Isotope Ratios
Carlos G. Fraga, Senior Research Scientist, National Security Directorate, Pacific Northwest National Laboratory, USA