1. Record Nr. UNINA9910254765503321 Titolo One Hundred Years of Chemical Warfare: Research, Deployment, Consequences [[electronic resource] /] / edited by Bretislav Friedrich, Dieter Hoffmann, Jürgen Renn, Florian Schmaltz, Martin Wolf Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-319-51664-7 Edizione [1st ed. 2017.] 1 online resource (XI, 408 p. 43 illus., 11 illus. in color.) Descrizione fisica Disciplina 355 Soggetti Military history Politics and war Chemistry—History Research—Moral and ethical aspects International humanitarian law System safety History of Military Military and Defence Studies History of Chemistry Research Ethics International Humanitarian Law, Law of Armed Conflict Security Science and Technology Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Intro -- Foreword -- Contents -- 1 Introduction -- Research on and Deployment of Chemical Weapons in World War I -- 2 The Scientist as

Deployment of Chemical Weapons in World War I -- 2 The Scientist as Expert: Fritz Haber and German Chemical Warfare During the First World War and Beyond -- Abstract -- References -- 3 From Berlin-Dahlem to the Fronts of World War I: The Role of Fritz Haber and His Kaiser Wilhelm Institute in German Chemical Warfare -- Abstract -- 1 The Run-up to Ypres -- 2 Ypres, 22 April, 1915, 1700 GMT -- 3 The Indispensable Fritz Haber -- 4 Haber's Kaiser Wilhelm Institute Under

Military Command -- 5 Haber's Views on Chemical Warfare -- 6 The Legacy of Ypres -- Acknowledgements -- References -- Additional Open Access Information -- 4 Clara Immerwahr: A Life in the Shadow of Fritz Haber -- Abstract -- 1 Prolog -- 2 Clara Immerwahr's Background -- 3 The Scientific Work of Clara Immerwahr -- 4 Clara's Husband: Fritz Haber -- 5 Clara Haber's Suicide -- 6 The "Myth of Clara Immerwahr" -- 7 Epilog -- Acknowledgements -- References --Addition to Open Access Information -- 5 France's Political and Military Reaction in the Aftermath of the First German Chemical Offensive in April 1915: The Road to Retaliation in Kind -- Abstract -- 1 Introduction -- 2 Retaliation in Kind: A Purely Military Decision -- 3 Between Eagerness and Constraints: Organizing the Chemical Response -- 4 Chemical War: Scientific War, Industrial War -- 5 Retaliation in Kind: Towards Total War -- References -- 6 Preparing for Poison Warfare: The Ethics and Politics of Britain's Chemical Weapons Program, 1915-1945 -- Abstract -- 1 Introduction -- 2 Ypres 1915 -- 3 Porton Down -- 4 Servants of the Realm -- 5 Crisis of Legitimacy -- 6 Collaboration -- 7 The Geneva Protocol -- 8 Foreboding -- 9 Ethical Relativism -- References.

7 Challenging the Laws of War by Technology, Blazing Nationalism and Militarism: Debating Chemical Warfare Before and After Ypres, 1899-1925 -- Abstract -- 1 Introduction: Chemical Weapons as the Subject of Juridification, Politicization, and Circumvention of Law -- 2 Codifying War Technologies in International Law Around 1900 -- 2.1 Restrictions on the Means and Methods of Warfare: The Regulations in International Law of 1868, 1899, and 1907 -- 2.1.1 The Principle of Humanity: The Saint Petersburg Declaration of 1868 -- 2.1.2 The Impotent Model: The Brussels Declaration on Land Warfare of 1874 -- 2.1.3 The First Poison Prohibition in International Treaty Law: The Declaration on the Use of Projectiles with Asphyxiating or Deleterious Gases and the Hague Convention on Land Warfare of 1899 -- 2.2 No Notion of What Lay Ahead: The Intense Legal Discourse on the Hague Convention and Uncontroversial Interpretations of the Prohibition of Poison Prior to 1915 -- 3 Militarization and Circumvention of Law: Debates on International Law During the Continental War with Gas, 1915-1918 --3.1 International Law: Alive, but not Kicking -- 3.1.1 Scholarly Publications on International Law During World War I -- 3.1.2 Unclear Motives for and Few Scruples About the Use of Poison: Ex Post Justifications -- 3.1.3 Was the German Employment of Poison Gas a Symptom of General Disdain for International Law? -- 3.2 The Law Comes Later: The Weak Normative Discourse on Gas Warfare After the German Attack -- 3.2.1 The Lack of Protest: Political Voices and Official Reports -- 3.2.2 The Daily Press: Restraint, Disinformation, and Loud Silence -- 3.3 Possible Interpretations: Raison de Guerre as Its Own Form of Normativity? -- 3.3.1 Older Traditions of Disregard for International Law -- 3.3.2 Normative Plurality and Renouncing International Law: The Nature of the Laws of War. 3.3.3 Cruel, Unmanly, and Unchivalrous: The Military's Aversion to the Use of Poison -- 4 The Continuing Politicization of International Law: The Legal Assessment of War Crimes, 1918-1925 -- 4.1 Crime and Argument: The Intense Discourse After the End of World War I -- 4.2 Self-justifications: The Nationalist Polarization of International Law --4.3 Politicized Scholarship: No Mediation Possible -- 4.4 Reforms as Affirmation of the Prohibition of Poison in International Law -- 4.4.1 Asymmetric New Paths: The Prohibitions of the Production and Possession of Weapons in the Paris Peace Treaties of 1919 -- 4.4.2 Pacifist Efforts: Initiatives by the League of Nations -- 4.4.3 An Expression of the General Opinion of the Civilized World: The

Washington Treaty of 1922 -- 4.4.4 Reassuring One's Principles: The Geneva Protocol on Poison Gas of 1925 -- 5 Summary: Expectations Regarding International Law -- References -- 8 Military-Industrial Interactions in the Development of Chemical Warfare, 1914-1918: Comparing National Cases Within the Technological System of the Great War -- Abstract -- 1 Introduction -- 2 The Western Front as a Technological Meta-System -- 3 Chemical Weapons as an Illustrative Case -- 4 Industrial Mobilization for Chemical Warfare: The Experimental Phase, 1914-15 -- 5 Scaling up, Innovation and Integration, 1915-17 -- 6 Culmination of the Chemical War, 1917-1918 -- 7 Concluding Reflections -- References -- Contexts and Consequences of Chemical Weapons -- 9 The Gas War, 1915-1918: If not a War Winner, Hardly a Failure -- Abstract -- 1 Introduction -- 2 Debate -- 3 Gas: Not a War Winner -- 4 The Challenge of Chemical Warfare -- 5 Effectiveness of the Gas War -- References -- 10 "Gas. Gas, Gaas!" The Poison Gas War in the Literature and Visual Arts of Interwar Europe -- Abstract -- Part I -- Part II -- References. 11 The Genie and the Bottle: Reflections on the Fate of the Geneva Protocol in the United States, 1918-1928 -- Abstract -- 1 Introduction -- 2 Science and the Great War -- 3 The Coming of Geneva -- 4 A Protocol Post-mortem -- 5 Summing up the Senate -- 6 Conclusion --References -- 12 The Soldier's Body in Gas Warfare: Trauma, Illness, Rentennot, 1915-1933 -- Abstract -- 1 Introduction -- 2 Perceptions in the Field -- 3 Gas and Psyche -- 4 Weimar to the Nazi Period-the Need of the Traumatized -- 5 Summary -- References -- 13 Chemical Weapons Research on Soldiers and Concentration Camp Inmates in Nazi Germany -- Abstract -- 1 Organizational Structures of Chemical Warfare Research in Germany -- 2 Chemical Weapons Research on Humans in Military and Academic Institutions -- 3 Experiments in Concentration Camps -- 3.1 Sachsenhausen -- 3.2 Natzweiler -- 3.2.1 The Sulphur Mustard Experiments of August Hirt -- 3.2.2 The Phosgene Experiments of Otto Bickenbach -- 3.2.3 New Series of Phosgene Experiments in June and August 1944 -- 3.3 Neuengamme -- 4 Conclusion -- References -- 14 No Retaliation in Kind: Japanese Chemical Warfare Policy in World War II -- Abstract -- References -- 15 The 1925 Geneva Protocol: China's CBW Charges Against Japan at the Tokyo War Crimes Tribunal -- Abstract -- 1 Introduction -- 2 World War II and the Post-war IMTFE -- 3 Retrieving CBW Evidence from China, 1946 -- 4 Conclusion -- References -- Dual Use, Storage and Disposal of Chemical Weapons Today -- 16 The Reconstruction of Production and Storage Sites for Chemical Warfare Agents and Weapons from Both World Wars in the Context of Assessing Former Munitions Sites -- Abstract -- 1 Introduction -- 2 The Ammendorf Factory of Orgacid GmbH -- 3 The History of Falkenhagen Factory of Monturon GmbH, Development, the Structure of the Buildings, and Production. 4 Production at the Falkenhagen Factory -- 4.1 Brief Description of the Facilities at the Factory -- 5 The Development of N-Stoff Production --5.1 The Buildings of the N-Stoff Plant at the "Seewerk" Falkenhagen --6 The Development of the Nerve Gases Tabun and Sarin -- 7 The Manufacturing Processes for Sarin -- 8 Vereinigte Flussspatgruben GmbH in Stulln -- 9 The Dyhernfurth Factory of Anorgana GmbH -- 10 The Filling and Storage of Chemical Weapons in the Munitions Facilities of the Army and Air Force -- 11 The Chemical Weapons Complex in Munster -- 12 Other Munitions Sites with Filling Plants for Chemical Weapons -- 13 Dismantling Work After the First World War -- 14 Summary and Prospects -- References and Source Materials -- 17 From Charles and Francis Darwin to Richard Nixon: The Origin and Termination of Anti-plant Chemical Warfare in Vietnam -- Abstract --

Acknowledgements -- References -- 18 The Indelible Smell of Apples: Poison Gas Survivors in Halabja, Kurdistan-Irag, and Their Struggle for Recognition -- Abstract -- 1 Introduction: The Indelible Smell of Apples -- 2 Background -- 3 The Anfal Campaign and the Poison Gas Attack Against Halabja in 1988 -- 4 The Situation of Survivors of the Poison Gas Attacks -- 4.1 Haunting Memories, Enduring Grief -- 4.2 Survivors' Life Conditions Between 1988 and 2003 -- 4.3 Changes After 2003 -- 5 New Threats, New Fear, and Joint Initiatives of Poison Gas Survivors -- References -- Films -- 19 The Use of Chemical Weapons in Syria: Implications and Consequences -- Abstract -- 1 Introduction -- 2 Early Reports of Chemical Weapons Use in the Syrian Civil War -- 3 The Secretary-General's Investigation -- 4 The Elimination of the Syrian Chemical Weapons Program -- 5 Chemical Weapons Destruction at Sea -- 6 New Incidents of Chemical Weapons Uses -- 7 Attribution and Accountability -- 8 Conclusions --References.

Commemoration Ceremony.

## Sommario/riassunto

This book is open access under a CC BY-NC 2.5 license. On April 22, 1915, the German military released 150 tons of chlorine gas at Ypres, Belgium. Carried by a long-awaited wind, the chlorine cloud passed within a few minutes through the British and French trenches, leaving behind at least 1,000 dead and 4,000 injured. This chemical attack, which amounted to the first use of a weapon of mass destruction, marks a turning point in world history. The preparation as well as the execution of the gas attack was orchestrated by Fritz Haber, the director of the Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry in Berlin-Dahlem. During World War I, Haber transformed his research institute into a center for the development of chemical weapons (and of the means of protection against them). Bretislav Friedrich and Martin Wolf (Fritz Haber Institute of the Max Planck Society, the successor institution of Haber's institute) together with Dieter Hoffmann, Jürgen Renn, and Florian Schmaltz (Max Planck Institute for the History of Science) organized an international symposium to commemorate the centenary of the infamous chemical attack. The symposium examined crucial facets of chemical warfare from the first research on and deployment of chemical weapons in WWI to the development and use of chemical warfare during the century hence. The focus was on scientific, ethical, legal, and political issues of chemical weapons research and deployment — including the issue of dual use — as well as the ongoing effort to control the possession of chemical weapons and to ultimately achieve their elimination. The volume consists of papers presented at the symposium and supplemented by additional articles that together cover key aspects of chemical warfare from 22 April 1915 until the summer of 2015.