## From Berlin-Dahlem to the Fronts of World War I: The Role of Fritz Haber and His Kaiser Wilhelm Institute in German Chemical Warfare

**Bretislav Friedrich and Jeremiah James** 

Abstract There is little doubt that Fritz Haber (1868–1934) was the driving force behind the centrally directed development of chemical warfare in Germany, whose use during World War I violated international law and elicited both immediate and enduring moral criticism. The chlorine cloud attack at Ypres on 22 April 1915 amounted to the first use of a weapon of mass destruction and as such marks a turning point in world history. Following the "success" at Ypres, Haber, eager to employ science in resolving the greatest strategic challenge of the war—the stalemate of trench warfare—promptly transformed his Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry in Berlin-Dahlem into a center for the development of chemical weapons and of protective measures against them. This article traces in some detail the path from Berlin-Dahlem to the fronts of World War I, lays out the indispensible role of Fritz Haber in German chemical warfare and provides a summary of his views on chemical weapons, which he never renounced.

## 1 The Run-up to Ypres

The lingering idea of using chemicals to incapacitate enemy troops had been rekindled by the belligerents in World War I once trench warfare produced a strategic stalemate on the war's Western front. On the German side, it was likely Max Bauer of the Supreme Army Command (*Oberste Heeresleitung*, OHL), see Fig. 1, who proposed to OHL's Chief, Erich von Falkenhayn, already in September 1914, to consider the use of chemical weapons in trench combat (Haber 1924, 85). In response to Bauer's proposal—and in the face of the shock of the Battle of the Marnel—von Falkenhayn promptly established a committee comprised of scien-

Fritz Haber Institute of the Max Planck Society, Faradayweg 4-6, 14195 Berlin, Germany e-mail: brich@fhi-berlin.mpg.de

<sup>&</sup>lt;sup>1</sup>Ending in Allied victory, this week-long battle (September 5–12, 1914) set the stage for the immovable trench warfare of the next four years of WWI.

B. Friedrich (⋈) · J. James

<sup>©</sup> The Author(s) 2017