



Ben-Gurion University of the Negev

# The Jacques Loeb Centre for the History and Philosophy of the Life Sciences

## Capturing Nitrogen: In Peace and War

**Anthony S. Travis**, Jacques Loeb Centre / The Hebrew  
University of Jerusalem

From the 1830s native guano from Bolivia and nitrates from Chile were the major sources of nitrogen products required to feed growing populations in Europe and North America. Nitrates were essential not only as fertilizers but also in the production of explosives, gunpowder and the modern nitro compounds. Monopolies and concerns over shortages led to extensive technical work in Europe, especially Germany, on capturing atmospheric nitrogen. In the early 1900s, synthetic nitrogen fertilizer became available via the Frank-Caro electrochemical cyanamide process and the Birkeland-Eyde electric arc process. In 1914, on the outbreak of the First World War, a completely new source had just become available, based on the German Haber-Bosch high pressure synthetic ammonia process. This talk will review the roles of the different products and processes in the provision of the vital, and strategic, nitrogen products that were required in both peace and war.

May 12th (Monday), building 39([map](#)),  
room 106 (de Picciotto conference room), 16:00

The Jacques Loeb Centre seminars provide an interdisciplinary forum, in which historians and philosophers of science, as well as scientists, present and discuss new research related to science with a special focus on the life sciences. Case studies and surveys examine the impact of political, socio-economic and personal factors on the conduct of science, the ethics of research, and the causes of progress and setbacks.

**Faculty and students from all disciplines are invited!**

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