

Roald Hoffmann: Around the World in Eighty Years

Daniel Rabinovich

Department of Chemistry, The University of North Carolina at Charlotte,
9201 University City Boulevard, Charlotte, NC 28223, USA
drabinov@uncc.edu

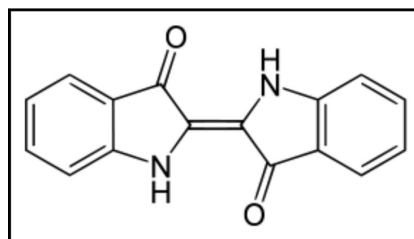
On 18 July 2017, the postal service of Ukraine issued a stamp [1] to mark the 80th birthday of Roald Hoffmann, the beloved Cornell University professor who has been at the forefront of what he describes with pride as “applied theoretical chemistry” and has taught chemistry to multiple generations of students for more than five decades.



[1]

Much has been written about –and much there is to admire in– the life and work of Roald Hoffmann (RH). His early childhood in a small town in Poland that is now part of Ukraine and his emigration to the United States in 1949. His indefatigable optimism for humankind, despite the tragedy of losing close relatives, including his father and three grandparents, in the Holocaust. His seminal work at Harvard University with William N. Lipscomb and Robert B. Woodward, which crossed many bridges and opened many doors of chemical knowledge. The countless honors and awards, including the 1981 Nobel Prize in Chemistry he shared with Kenichi Fukui “for their theories, developed independently, concerning the course of chemical reactions”. His expressive and fertile mind and the meticulous writing of more than 600 research papers and several poetry books and plays, including “Oxygen” (co-authored with Carl Djerassi, another prolific writer). His interest in philosophy, history, ethics, and the visual arts, reflected in a myriad of engaging short articles written for magazines such as *American Scientist*, which I have truly enjoyed reading and *collecting*. His dedication to mentor dozens of undergraduate and graduate students, and to collaborate with more than 200 senior visitors and postdoctoral fellows... much to admire, indeed!

In any event, the stamp [1] features a recent headshot of RH, drawings of a couple of molecular orbitals of butadiene towards the lower left corner, and partial views of two molecules of indigo [2], a fortuitous choice by the stamp designers at *Ukrposhta* since the famous blue dye is among his favorite molecules.



[2]

The commemorative issue was printed in sheets of 12 stamps that measure 155 x 125 mm [3]. The marginal inscription towards the upper right corner (in Ukrainian) says “Nobel Prize Laureates” and RH’s name and the year he was awarded the Nobel Prize in Chemistry (1981) are shown on the lower left corner of the sheet.

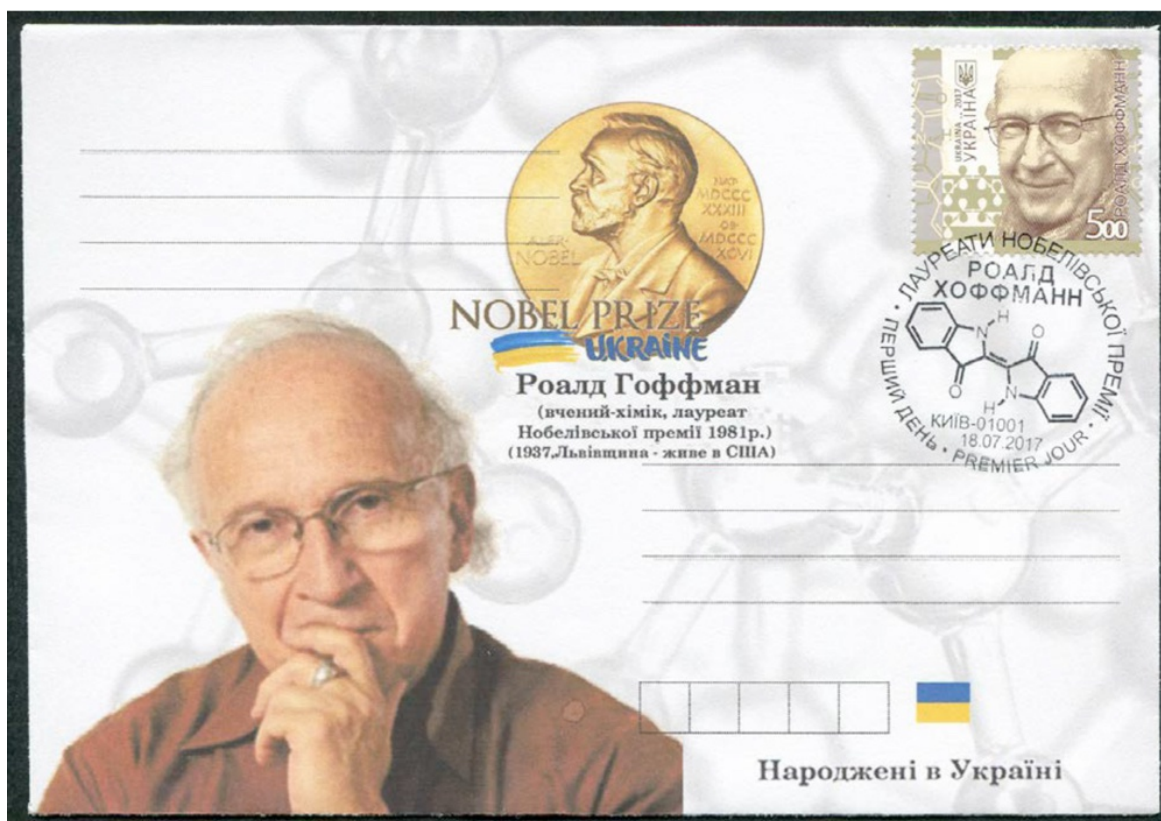


[3]

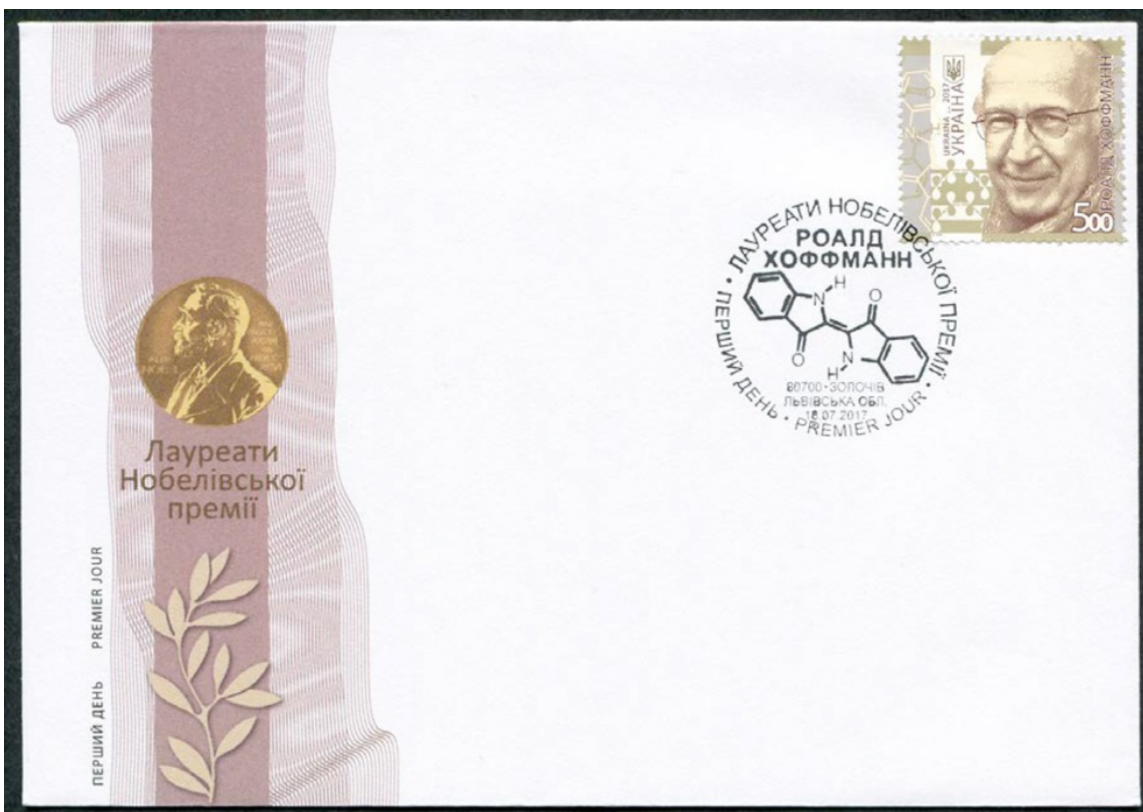
Decorative elements on both the left and right margins of the sheet, much like on the stamp itself, include molecular orbitals of butadiene and structural diagrams of indigo. Last but not least, the smaller but longer caption on the lower right corner of the sheet can be translated approximately to:

“Main scientific achievements of Roald Hoffmann involve the use of quantum mechanics for studying the mechanisms of chemical reactions. Nobel Prize winner for the development of theories concerning the course of chemical reactions.”

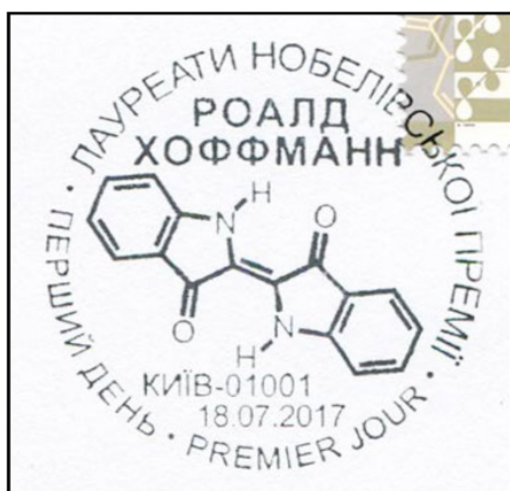
Two different First Day cancellations were made available to the public when the stamp was released, one from Kiev (Київ) [4,5], the capital and largest city of Ukraine (population ca. 2.9 million), and the other from RH's “original” hometown of Zolochiv (Золочів) [6,7], which even today has a population of only ~25,000. Incidentally, I suspect the cancellation from Zolochiv is more rare but I have not been able to find any data pertaining to the number of First Day Covers prepared. Both circular postmarks include the date of issue (18.07.2017) and a structural diagram of indigo, a nice touch that RH certainly appreciates.



[4]

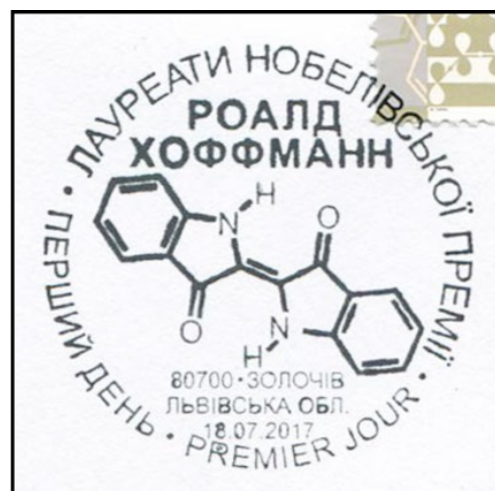


[6]



[5]

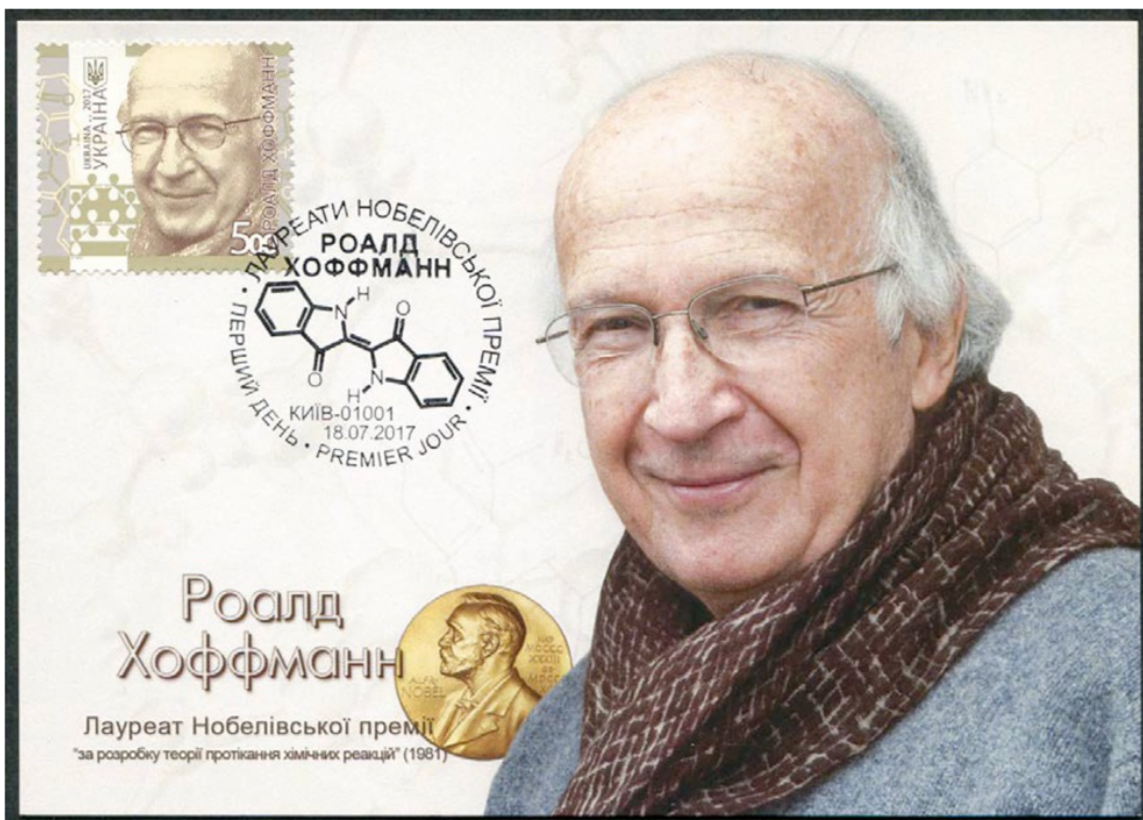
Kiev cancellation



[7]

Zolochiv cancellation

A maximum card [8] was also prepared for the occasion and features the same photograph of RH used on the stamp as the main illustration, plus the circular postmark from Kiev dated 18 July 2017.



[8]

Note

A previous stamp in the “Nobel Prize Laureates” series from Ukraine, with a similar overall design (Scott No. 1010), was issued on 13 February 2015 to pay tribute to Ilya Mechnikov (1845-1916), the Russian zoologist who shared the 1908 Nobel Prize in Physiology or Medicine with Paul Ehrlich “in recognition of their work on immunity”

Acknowledgement

The author thanks Prof. Anna Larsen (Dept. of Chemistry, Ithaca College) and Dr. Ilia Guzei (University of Wisconsin-Madison) for their help with the translation of Ukrainian text into English.

