

WELCOME ADDRESS

Dear Colleagues,

This year, we are celebrating the centenary of the Polish Physical Society. The society was founded on April 11, 1920 to expedite the integration of Poland. Among the founding members of the Polish Physical Society were outstanding Polish scientists representing 5 major research centers in Poland: Kraków, Lviv, Poznań, Warszawa and Vilnius. In this way, a modern forum for the exchange of thoughts and research results was created. In the following years, the Society's reputation was built by world-class physicists such as Wojciech Natanson, the first President of the Society, Wojciech Rubinowicz, co-creator of diffraction theory, or Mieczysław Wolfke, co-discoverer of the phenomenon of superfluidity.

Today, the Polish Physical Society is composed of outstanding physicists from academic and scientific centers in Poland and abroad, as well as a group of excellent, creative physics teachers from schools at various levels of education. The Congress of Polish Physicists which continues to be held biennially has become a forum for exchanging ideas and creating new research directions. Thanks to public lectures and presentations, Congresses of Polish Physicists are events of a social nature and promote breakthrough scientific achievements among the public.

On October 18, 2019, the Senate of the Republic of Poland adopted a resolution establishing 2020 as the Year of Physics. The resolution reads: "The Senate of the Republic of Poland establishes 2020 as the Year of Physics, the 100th anniversary of the Polish Physical Society. At the same time, the Senate would like to emphasize the merits of Polish physicists for world science and recall the remarkable development of Polish physics that took place after Poland regained independence in 1918."

The 46th Extraordinary Congress of Polish Physicists will be the culmination of the 100th anniversary of the Polish Physical Society. Originally, the Congress was scheduled for April 24–26, but due to the Covid-19 pandemic it was moved to October 16–18, 2020. I am sure it will be an unforgettable event.

Acta Physica Polonica A and *Acta Physica Polonica B* are internationally recognized publications of the Polish Physical Society. The history of these prestigious international journals dates back to 1923, when the first volume of the *Reports and Works of the Polish Physical Society* (*Comptes Rendus des Séances de la Société Polonaise de Physique*) was published. In 1932, *Reports...* are transformed into *Acta Physica Polonica*. Since 1970, *Acta Physica Polonica* has been published in two independent series: *Acta Physica Polonica A*, published by the Institute of Physics of the Polish

Academy of Sciences in Warsaw, and *Acta Physica Polonica B*, published by the Jagiellonian University in cooperation with the Polish Academy of Arts and Sciences.

The special issue of *Acta Physica Polonica B* Vol. 51, No. 5 (2020), was issued on the occasion of the 100th anniversary of the Polish Physical Society and the upcoming 100th anniversary of the *Acta Physica Polonica* journals.

On behalf of the Polish Physical Society, the editors of *Acta Physica Polonica B* and the authors of the articles, I wish you enjoy reading this special issue.

President of the Polish Physical Society
Leszek Sirko