

Editorial

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This issue represents a translation into English of monograph [1], originally published in Russian in 2015 and structured as separate review articles. The monograph is devoted to describing methods of obtaining and investigating the characteristics of organic light-emitting diodes (OLEDs) based on metal coordination compounds.

Over the past eight years, numerous new studies have emerged on the topic under consideration, necessitating a revision of the current edition to incorporate these developments. This publication includes newly acquired data, reviews of recent research, and references to new publications.

After the release of this book in Russian, the mass production of industrial products based on OLED began, including displays for smartphones, televisions, tablets, laptops, smartwatches, etc. OLEDs are increasingly being used as energy-efficient light sources. The advancement of these technologies requires the development of materials for OLED manufacturing that meet rather stringent operational requirements. Therefore, interest in the issues considered in this publication remains strong.

The fabrication of the emissive layer in OLEDs often relies on low-molecular-weight metal complexes

featuring organic ligands, prized for their exceptional electroluminescent properties. However, persistent challenges include inadequate stability of luminescent characteristics, color purity concerns, limited lifespan, precision in achieving nanometric layers, and cost considerations. Addressing these hurdles necessitates further fundamental research in synthesizing and exploring the physicochemical properties of compounds—promising materials for OLEDs.

REFERENCES

1. Burlov, A.S., Vlasenko, V.G., Garnovskii, D.A., et al., *Elektroluminescentnye organicheskie svetodiody na osnove koordinatsionnykh soedinenii metallov* (Electroluminescent Organic Light-Emitting Diodes Based on Metal Coordination Compounds), Rostov-on-Don: Yuzhn. Fed. Univ., 2015.

A. S. Burlov
Research Institute of Physical and Organic Chemistry,
Southern Federal University, Rostov-on-Don, Russia
e-mail: anatoly.burlov@yandex.ru

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