

Preface to the second edition

Spintronics is not stopping in its dynamic development. Over the past few years, surprising new results have been obtained and new technological solutions have been implemented. However, all this requires an understanding of the fundamentals of the physical issues of spintronics. That is why the need to reissue this book arose.

In the second edition of the book, minor errors in the text have been corrected. In addition, the references have been expanded and updated to facilitate access to the latest research developments. In the third chapter, new information about exotic magnetization states, the hopfions, is provided. Also, in the same chapter we extend the analysis of the Dzyaloshinskii–Moriya interaction (DMI) for new symmetry classes of materials. In Chapter 6, some new remarks about the second quantization perspective for the Kondo effect analysis are added.

We wish the reader a lot of patience in learning the basics of the issues presented in the book, hoping that it will be a support and a good guide in the search for more scientific discoveries.

Tomasz Blachowicz and Andrea Ehrmann

