

First Machine-generated Book by Springer Nature

Springer Nature published its first machine-generated book in chemistry. The book prototype provides an overview of the latest research in the rapidly growing field of lithium-ion batteries. The content is a cross-corpus auto-summarization of a large number of current research articles in this discipline. Serving as a structured excerpt from a huge set of papers, the innovative pipeline architecture aims at helping researchers to manage the information overload in this discipline efficiently.

In close collaboration between Springer Nature and researchers from Goethe University Frankfurt/Main, a state-of-the-art algorithm, the so-called Beta Writer, was developed to select, consume and process relevant publications in this field from Springer Nature's content platform *SpringerLink*. Based on this peer-reviewed and published content, the Beta Writer uses a similarity-based clustering routine to arrange the source documents into coherent chapters and sections. It then creates succinct summaries of the articles. The extracted quotes are referenced by hyperlinks which allow readers to further explore the original source documents. Automatically created introductions, table of contents and references facilitate the orientation within the book.

Springer Nature is thrilled to finally publish this new type of research content and make it available for the global research community. While research articles and books written by researchers and authors will continue to play a crucial role in scientific publishing, we foresee many different content types in academic publishing in the future: from yet entirely human-created content creation to a variety of blended man-machine text generation to entirely machine-generated text. This prototype is a first important milestone we reached, and it will hopefully also initiate a public debate on the opportunities, implications, challenges and potential risks of machine-generated content in scholarly publishing.

In the future, Springer Nature plans to expand this pilot project by developing prototypes for content from other subject areas as well. This book is designed for all interested audiences: researchers, master and PhD students, reviewers, academic writers, librarians and decision makers in science education. It is available as eBook and print book. The eBook is freely available for readers on *SpringerLink* (<https://link.springer.com>).

See if you can tell the difference between a machine-generated book and human-written book!

