



Supercritical Fluid Nanotechnology

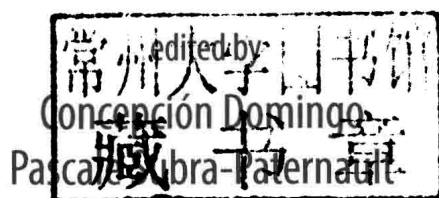
Advances and Applications in Composites
and Hybrid Nanomaterials

edited by
Concepción Domingo
Pascale Subra-Paternault



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and Hybrid Nanomaterials



Published by

Pan Stanford Publishing Pte. Ltd.
Penthouse Level, Suntec Tower 3
8 Temasek Boulevard
Singapore 038988

Email: editorial@panstanford.com

Web: www.panstanford.com

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

**Supercritical Fluid Nanotechnology: Advances and
Applications in Composites and Hybrid Nanomaterials**

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ISBN 978-981-4613-40-8 (Hardcover)

ISBN 978-981-4613-41-5 (eBook)

Printed in the USA



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Preface

Nanotechnology development is directly linked to long-term energy and environment sustainability. However, many new nanomaterials require new commercial production techniques. In this respect, more and more industries are recognizing compressed and supercritical CO₂ as a powerful green and safe technology for nanomaterial design and manufacturing. Supercritical CO₂ technology has made a transition over the past 25 years from a laboratory curiosity to a large-scale commercial reality for materials processing, with very diverse applications, such as pharmaceuticals, nutraceuticals, polymers, and textiles. Moreover, the use of recycled CO₂ in industries instead of more pollutant solvents would mitigate the CO₂ detrimental effect on climate change.

This book illustrates the basis of currently important supercritical CO₂ processing techniques, as well as the main laboratory and industrial applications. The chapters in this book provide tutorial accounts of topical areas to better understand the capacity of this environmentally friendly technology for creating and manipulating nanoscale materials for the next generation of products and technologies.

C. Domingo

P. Subra-Patternault

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