

Book review

Biodiesel – A comprehensive handbook edited by Martin Mittelbach and Claudia Remschmidt (2004) Martin Mittelbach, Graz (Austria) 2004. Paperback, 330 pages. 51 €. ISBN: 3-200-00249-2

With more than thousand articles available on biodiesel by now, the publication of a biodiesel handbook was to be expected, if not long overdue. Indeed, two such handbooks appeared in 2004, one written by 25 authors from different countries, the other, *Biodiesel – A Comprehensive Handbook*, written by Martin Mittelbach and Claudia Remschmidt from Austria. Authorship by only two persons bears the advantage of high consistency in structure, presentation, and treatment of the material; on the other hand, there is a higher risk of not covering some side-aspects of the broad topic to be dealt with.

The book reviewed here is an in-depth treatment of the scientific aspects of biodiesel. The first chapter on “Current technologies in biodiesel production” already comprises one third of the book; in these 108 pages emphasis is laid in detail on catalysts, *i.e.* alkaline, acid, and enzymatic catalysts. Furthermore, processing conditions are discussed briefly as well as alternative applications of fatty acid methyl esters.

The second chapter is entitled “Fuel properties, quality specification and fuel analysis for biodiesel and fossil

diesel.” All important fuel parameters, such as European, U.S., and Australian standards, including standardized methods for their determination, are addressed in detail.

The following chapters on “Exhaust emissions and exhaust gas after treatment systems. . .”, “Human health effects. . .”, “Environmental impacts. . .”, and “Appendix: Fuel properties of biodiesel produced from different raw materials”, although shorter contributions, form highly valuable parts of the book as well.

In a nutshell, the handbook focuses on the technical, environmental, and health aspects of biodiesel. In contrast, economic questions, marketing, logistics, legal aspects, tax regulations, actual amounts of production and use of biodiesel in different countries, *etc.*, are not addressed in detail. An index for the vast amount of material presented in this handbook would have been helpful. Yet, the collection of references, almost one thousand, is impressive.

I consider the handbook a highly valuable source of materials contained in text *and* references cited. The authors have solved their task to compile a handbook on biodiesel in an excellent way.

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