

Direct Liquid Fuel Cells-Fundamentals, Advances and Future

Editors: Ramiz Gültekin Akay and Ayşe Bayrakçeken Yurtcan

Direct Liquid Fuel Cells is a comprehensive overview of the fundamentals and specificities of the use of methanol, ethanol, glycerol, formic acid and formate, dimethyl ether, borohydride, hydrazine and other promising liquid fuels in fuel cells.

Key Features

Presents information on different types of direct liquid fuel cells.

Explores information under each section, for specific fuel-based fuel cells in more detail in terms of the materials used.

Covers three main sections: direct alcohol, organic fuel-based and inorganic fuel-based fuel cells

Table of Contents

1. Introduction to fuel cells
2. Introduction to direct alcohol fuel cells (DAFCs)
3. Direct methanol fuel cells (DMFCs)
4. Direct ethanol fuel cells (DEFCs)
5. Direct glycerol fuel cells (DGFCs)
6. Introduction to other organic fuel-based fuel cells
7. Direct formic acid and formate fuel cells (DF(A)FCs)
8. Direct dimethyl ether fuel cells (DDMEFCs)
9. Introduction to inorganic fuel-based direct liquid fuel cells
10. Direct borohydride fuel cells (DBFCs)
11. Direct hydrazine fuel cells (DHFCs)
12. Other possible fuels and possible use of blended fuels in fuel cells
13. Conclusions: Current state and future

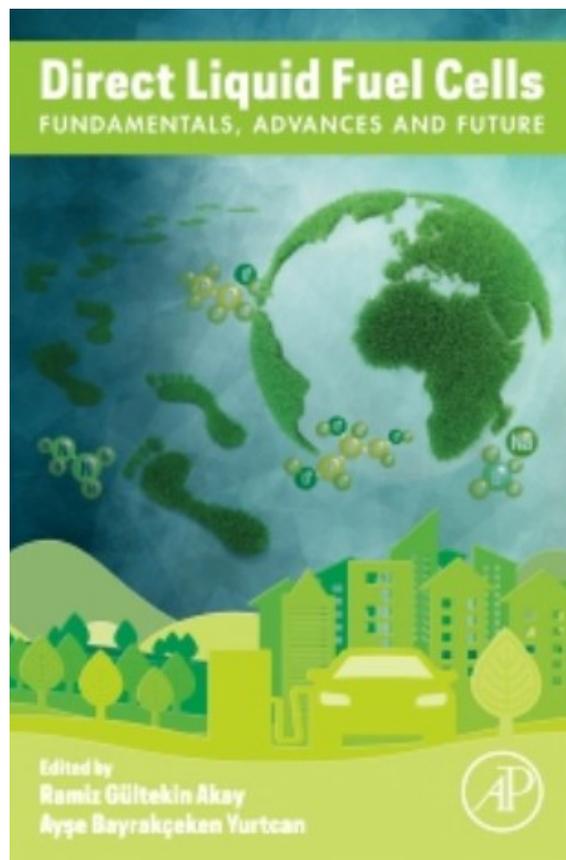
READERSHIP

Direct Liquid Fuel Cells is not a typical textbook but rather designed as a reference book of which any level of students (undergraduate or graduate), instructors, field specialists, industry and general audience, who benefit from current and complete understanding of the many aspects involved in the development and operation of these types of fuel cells, could make use of any chapter when necessary.

AUTHOR INFORMATION

Ramiz Gültekin Akay is an assistant professor of Chemical Engineering in the Department of Chemical Engineering at Kocaeli University, Turkey. His research focuses on fuel cells, polymer electrolyte membranes, electrochemical characterizations, and related subjects.

Ayşe Bayrakçeken Yurtcan is a professor of Chemical Engineering in the Department of Chemical Engineering at Atatürk University, Turkey. Her research focuses on electrocatalysts for fuel cells, carbon-based nanomaterials, nanomaterials for energy, and material characterization.



ISBN-paperback:	9780128186244
ISBN-eBook	9780128187364
Price:	\$148.75
Extent:	328pp
Format:	Hardback
Published:	2020
Rights:	World – all languages

Order online:

<https://www.elsevier.com/books/direct-liquid-fuel-cells/akay/978-0-12-818624-4>