# The Future of Glycerol: New Usages for a
Authors: Mario Pagliaro, Michele Rossi

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## Subject Index

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**Pages** 124 - 127

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## About this book

By-products of global biodiesel manufacturing are a global fact and the immense an
until mid 2005 gave a visual image of the huge loss of energy and material resources.
processes for this, the oldest organic molecule known to man, despite various exper
surplus of glycerol by-product which entered the chemical market has caused closu
processes that use glycerol as a raw material for the production of value-added chen
3-4 years of intense research activity worldwide, where human chemical ingenuity c
convert glycerol into value added products of mass consumption. For instance, the
your car's antifreeze will soon be based on glycerol, the same sweet viscous substan

Reporting and commenting on such achievements this book aims to inform chemis
technologists, on the large potential of glycerol as versatile biofeedstock for the prod
fuels. Whilst filling a gap in the current literature, this nicely illustrated book is writt
numerous uses of glycerol as a new raw material which are starting to have an impac
principles governing the new chemistry of glycerol goes along with updated industr
retrieve.

Through its 10 chapters, the monograph tells the story of a chemical success -- that
-- and highlight the principles that made it possible. Whether as solvent, antifreeze,
catalytic conversions of glycerol have been discovered that are finding application fo
from everyday life to the fine chemical industry. Readers are also shown how a num
chemistry, such as the low selectivity encountered employing traditional stoichiom
actually solved based on the understanding of the fundamental chemistry of glycero
technology. Readers also find a thorough discussion on the sustainability issues of
environmental and economic dimensions to reflect the needs of politicians and citi
research. By explaining the advantages and problems as well as offering solutions th
biodiesel and glycerol refineries are convenient and economically sound.

Chemical research on glycerol has shown that given a strong economic input, chem
upgrading processes for the biorefinery and that the latter integrated unity for prod
environmentally-minded scientists but an inevitable reality of today. Due to the ev

global society is being forced to switch from fossil to renewable fuels until cheap an reality. In this evolution, biofuels, particularly biodiesel, will certainly play a role and the biorefinery for many years to come. Dealing with such a hot topic of urgent scie "living book" in which updates will be posted yearly on the RSC website.

The book's users include industry's top managers and management consultants an technical content of a high quality, this is also a strategic book for top managers of t detergent industries.

From the book series:
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## Author information

Mario Pagliaro is a chemistry scholar based at Palermo's CNR where he leads Sicily's of his Laboratory are reported in a large body of research papers spanning many fiel discoveries of his Lab are at the origin of new, diverse successful commercial produ books, including Flexible Solar Cells and Silica-Based Materals. He has a prolonged i methodology and is often cited for his excellence in teaching. His website is qualita

Michele Rossi holds a chair of inorganic chemistry at the University of Milan. He gra of Milan in 1963 at Professor Malatesta's school. In 1974 he became Professor of inor 1988 he returned to Milan. His research, documented in more than 150 papers and s catalysis and has led to important results in the activation of small molecules for ca nitrogen fixation.

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