DESCRIPTION

Discussing the technological supremacy of the chemical industry, including pharmaceuticals, and how it will adopt a leading position to solve some of the largest global challenges humans have even seen, this book details how the industry will address climate change, aging populations, resource scarcity, globality, networks speed, pandemics, and massive growth and demand.

Following a detailed introduction to some of the megatrends shaping our world over the forthcoming decades, the book goes on to provide several scenarios of how the world could look by 2050, including 'business as usual' and a 'sustainable' one. Chapter 3 gives a comprehensive overview of the current status, while providing a short historical review of the chemical industry, its origins, achievements and fundamentals. The following chapter reviews the potential impact of each of the selected megatrends on the industry, while Chapter 5 proposes how it could look by 2050. Several features of the chemical industry are presented and discussed, including the industrial relevance from an economical, technological and profitability point of view. The largest chemicals markets in absolute and per capita bases and the areas and countries with largest growth potential for chemicals, pharmaceuticals and feedstock. This chapter also reviews the impact of climate change on the chemical industry from a feedstocks and products point of view and, more specifically, the potential costs in reducing CO2 emissions. A final, concluding chapter summarizes the forthcoming megatrends and potential challenges, opportunities and the outlook for the industry as a whole.
ABOUT THE AUTHOR

Rafael Cayuela Valencia is an economist by the education and has a decade of experience within the chemical industry. He holds a degree in Business and Economics from the university Complutense in Madrid, Spain and Wolverhampton in UK, a Masters degree in European Economics from the College of Europe, Brugge, Belgium and an Executive MBA from The University of Chicago, USA and an MBA from the Dow Chemical & Northwood MBA, Michigan, USA. Rafael Cayuela has worked for The Dow Chemical Company in Madrid, Spain, Dow global headquarters in Midland Michigan and Dow European Headquarters in Horgen, Zurich, Switzerland. Since 2010 Rafael Cayuela works as the global product and marketing director for STYRON, a spin off company of Dow Chemical. In its current work for the last years Rafael has been gathering significant experience in petrochemicals, plastics and synthetic rubber around the world and specially in emerging markets; in particular in China, Korea, Indonesia, Brazil and India.

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