

BOOK REVIEW

Environmental Zeolites and Aqueous Media: Examples on Practical Solutions

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Zeolites are cheap and effective materials for developing countries to solve their environmental problems and obtain clean resources such as drinking water. Scientific research studies not only 'why' but also 'how'. Many science books stop at explaining why but do not go further for how to apply the knowledge to solve practical problems. Professor Eva Chmielewska very well writes both, the 'why' and the 'how' of zeolites in this eBook.

After the introduction, Chapter 2 starts with the history of utilizing zeolites in human history. Chapter 3 comes to the crystal structure of zeolites, which is quite a standard presentation to a chemistry book. Chapter 4 describes the ion exchange process and the absorption of zeolites into aqueous solutions. Chapter 5 introduces phosphate removal by natural materials. These chapters successfully help readers understand the properties of zeolites and why zeolites can be used to clean water. Chapter 6 teaches readers how to use zeolites to clean water with a lot of examples and figures. Chapter 7 further talks about the ongoing development of applying the rich tuff. The last two chapters clearly show how to apply the zeoliteBased approach to solve the practical problems. Zeolites are available with reasonable costs in many regions on earth. They are the great gift from Mother Nature, which should be better understood and efficiently utilized. This eBook assists us with respect to ideas as well as actions.

Water is a limited resource and a necessity for life. In 2010, the Resolution 64/292 of the United Nations (UN) General Assembly explicitly recognized the human right to water and sanitation; moreover, clean drinking water and sanitation are acknowledged as 'essential to the realization of all human rights'. The UN targets on promoting water rights are sufficient, safe, acceptable, physically accessible, and affordable. However, most people in the world are facing difficulties in getting water and various kinds of water pollution. According to UN reports, the average distance for

women in Africa and Asia to walk to collect water is 6 kilometers. There is also a serious disparity in water usage. The average daily water use is from 200-300 liters per person in most countries in Europe, compared to less than 10 liters in countries such as Mozambique. The cost-effective application of zeolites introduced in this eBook indeed enables us to protect the human right in water and satisfy the basic human needs.

This eBook contains a lot of colorful figures and photos, making reading it quite an enjoyable job. It can be used for a popular science book for everyone as well as a tool book for engineers. In addition to the professional knowledge, Professor Eva Chmielewska also shows her foresight to advise people to acquire clean resources such that the well-being for people, especially in developing economies, can be sustained. Scientists are not only the observers but also the helpers to people all over the world. The business model of eBooks also facilitates the dispersion and share of knowledge across the borders. It is another Moore's Law in knowledge diffusion created by Internet.

This eBook enables practically valuable environmental knowledge to be shared worldwide. Ideas and actions are both necessary to continuously make a better global village for human beings. People need useful knowledge to improve their real circumstance such that the future generations can keep sustaining the human development on this planet.

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