

Preface

This book presents a full state-of-the-art review and critical evaluation of the type and magnitude of the various sorption and incorporation processes in hydrated cement systems that are responsible for the retention properties of cementitious materials towards radionuclides and metals from a variety of radioactive and industrial wastes.

The book is triggered by and based on two reports commissioned by the Belgian Agency for Radioactive Waste and Enriched Fissile Materials ONDRAF/NIRAS, which are both authored or co-authored by the authors of this book. While these reports were ultimately aimed at providing key sorption values for the safety analysis of a planned repository for short-lived low- and medium-level radioactive waste, it is emphasised throughout both the original reports and the present book that selected sorption values should be underpinned, to the greatest extent possible, by scientific arguments and process understanding. Accordingly, an international panel of experts, including the authors of this book, had been involved in a peer review process of data evaluation, selection of recommended values, and development of the scientific state of the art.

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