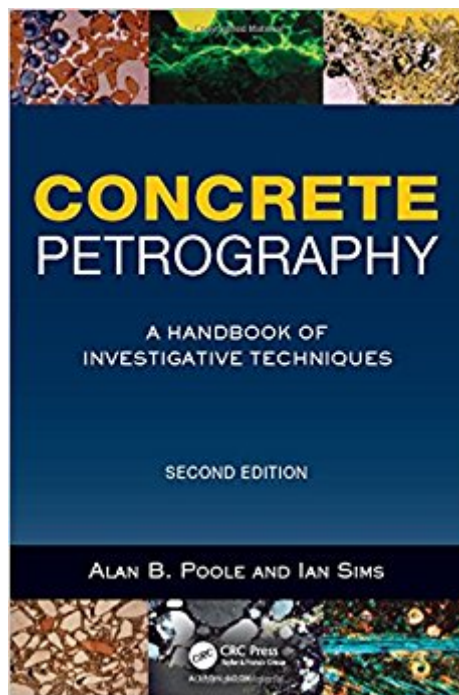




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# Concrete Petrography: A Handbook Of Investigative Techniques, Second Edition



## Synopsis

This classic reference has established the value of petrography as a powerful method for the investigation of concrete as a material. It provides an authoritative and well-illustrated review of concrete composition and textures, including the causes of defects, deterioration, and failure that can be identified using a petrological microscope. This new edition is entirely revised and updated and also greatly extended to take account of new scientific developments and significant improvements in instrumentation and to reflect current laboratory working practices, as well as to reflect new understanding of the performance of concrete and related materials. Now in full color throughout, *Concrete Petrography, Second Edition* provides case study examples, with appropriate explanatory discussions and practical advice on selecting, handling and preparing specimens. It assists and guides the engineer, the trainee and the experienced petrographer in understanding the scientific evidence that is basic to petrographic analysis and so will lead to more accurate and timely diagnosis and treatment of problems in structural concrete. This book includes:

Contributions in specialist areas by internationally recognized experts  
Explanation of computer techniques as an aid to petrography  
Full coverage of inspection, sampling, and specimen preparation  
New sections covering recent technological development of equipment  
Guidance on observation of cement and concrete mineralogy and microfabrics  
Discussion and illustrative examples of deterioration and failure mechanisms  
New work and guidance on the determination of water/cement ratio  
New color illustrations and micrographs throughout  
Thorough updating of standards, other authoritative publications, and references  
A fully revised, extended, and updated glossary of optical and other properties

## Book Information

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## Customer Reviews

"Over the years, the first edition of Concrete Petrography has earned its spurs as a standard reference work for its target audience, and beyond. This lavishly illustrated second edition has been updated, vastly improved and extended. Its broad variety of topics caters to lab technicians, microscope operators, and academic learners. A comprehensive work like this deserves a place on the shelf of each petrographic lab or preparation room."Ã¢ââ Dr. Maarten A.T.M. Broekmans, Geological Survey of Norway Ã¢ââ NGU "Ã¢ââ reflects decades of experience with concrete from the authors. Both are experts in the subject and a great effort is shown by the list of updated references that is included. The book not only explains the basic concepts needed for the performance of concrete petrography but also goes into unexpected detail regarding concrete composition, methods and sample preparation. The fact that it covers all the mechanisms known of concrete deterioration gives the reader important clues about the best approach on assessing a damaged structure. Ã¢ââ It is a requisite in this area of knowledge!"Ã¢ââ Isabel Fernandes, University of Lisbon "The book is encyclopaedic in character but very lucid and readable and I can truly recommend it to those who seriously investigate concrete, and especially problems in concrete in service. I know no better book on concrete petrography."Ã¢ââ Adam Neville, from the Foreword "I believe that this volume will stand for many years as the international standard and definitive source of information on the petrography of concrete and congratulate the authors on their accomplishment"Ã¢ââ Sydney Diamond, Purdue University, USA in the Foreword "This authoritative book is very welcome arrival...I sincerely congratulate the authors on their tremendous effort to produce this comprehensive invaluable text on concrete petrography...I would like to strongly recommend it to the whole cross section of professionals, researchers and academics who deal with the examination and evaluation of concrete structures, particularly those suffering from deterioration."Ã¢ââ Concrete Institute of Australia"... this is one of those rare 'must read' books... this is a book that unlocks the mysteries of concrete ... one of those books that one feels one must have on the technical bookshelf because you know you will want to refer to it at almost any time... a handsome book ... if you are 'into' concrete in any way, you must try this book ...if only for a new colourful view of the 'grey old concrete'."Ã¢ââ The Structural Engineer"... a good reference source..."Ã¢ââ The Indian Concrete

Journal, Sept 1998"... a comprehensive review ... this book provides a sound description of the literature of the subject ... a valuable resource ... an excellent introduction ... a useful guide to the engineer ... clear and useful photomicrographs ... the value of petrography will be enhanced by this book." *Chemistry and Industry*, April 1999

Dr. Alan Poole began his career as a geologist before becoming a consultant specializing in the petrography of aggregates, concrete and related materials. He gained a wide experience of both the practical and research aspects of alkali-aggregate reaction in concrete working both in the UK and abroad. He is involved in specialist post-graduate training, with British and European standards committees and with technical working parties. Dr. Ian Sims is a director of RSK Environment Ltd in the UK, where he is responsible for their Materials Consultancy team (including their Petrography Laboratory) and expert witness services. He is Chairman of the British Standards aggregates committee; and previously Secretary of the Geological Society (Engineering Group) working parties on Aggregates, Stone and Clay materials for construction, also their working party on Hot Deserts: engineering, geology and geomorphology, and of the RILEM international technical committees on alkali-aggregate reactivity in concrete (1988 to 2014).

This is a very good book.

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