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### DESCRIPTION

The aim of *Cement and Concrete Research* is to publish the best research on **cement, cement composites, concrete** and other allied materials that incorporate cement. In doing so, the journal will present: the results of research on the properties and performance of cement and concrete; novel experimental techniques; the latest analytical and modelling methods; the examination and the diagnosis of real cement and concrete structures; and the potential for improved materials. The fields which the journal aims to cover are:

- **Processing:** Cement manufacture, mixing and rheology, admixtures and hydration. While the majority of articles will be concerned with Portland cements, we encourage articles on other cement systems, such as calcium aluminate.
- **Structural and Microstructural Characterisation** of the unhydrated components and of hydrated systems including: the chemistry, crystal structure, pore structure of cement and concrete, characterisation techniques, and structural and microstructural modelling.
- The **properties** of cement and concrete, including: fundamental physical properties; transport, mechanical and other properties, the processes of degradation of cement and concrete; and the modelling of properties, both as a means of predicting short and long performance, and as a means of relating a material's structure to its properties.
- **Applications** for cement and concrete, including: concrete technology, fibre reinforcement, waste management, and novel concretes.

The journal's principal publications are original articles containing new information, major reviews and selected papers from important conferences. Discussion of published material and rapid communications will form part of the journal where appropriate. The journal will focus on papers with a broad interest, based upon their subject area, the quality of the research, the novelty of the results and the potential for assimilation of the findings.

### AUDIENCE

Materials scientists, civil and structural engineers.

### IMPACT FACTOR

2017: 5.430 © Clarivate Analytics Journal Citation Reports 2018

## ABSTRACTING AND INDEXING

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Energy Data Base  
Concrete Abstracts  
Materials Science Citation Index  
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Chemical Abstracts  
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### INTRODUCTION

The aim of *Cement and Concrete Research* is to publish the best research on cement, cement composites, concrete and other allied materials that incorporate cement. In doing so, the journal will present: the results of research on the properties and performance of cement and concrete; novel experimental techniques; the latest analytical and modelling methods; the examination and the diagnosis of real cement and concrete structures; and the potential for improved materials. The fields which the journal aims to cover are:

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- The properties of cement and concrete, including: fundamental physical properties; transport, mechanical and other properties, the processes of degradation of cement and concrete; and the modelling of properties, both as a means of predicting short and long performance, and as a means of relating a material's structure to its properties.
- Applications for cement and concrete, including: concrete technology, fibre reinforcement, waste management, and novel concretes.

### Types of Paper

The journal accepts four types of article: Research Papers, Reviews, Communications (maximum submitted length of 6 manuscript pages) and Discussions (maximum submitted length of 4 manuscript pages) - the maximum number of manuscript pages includes tables and figures. The Journal publishes papers in English only. All papers deemed within the scope of the journal will be independently refereed.

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**List:** Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

#### *Examples:*

Reference to a journal publication:

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59. <https://doi.org/10.1016/j.Sc.2010.00372>.

Reference to a journal publication with an article number:

[2] Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2018. The art of writing a scientific article. *Heliyon.* 19, e00205. <https://doi.org/10.1016/j.heliyon.2018.e00205>.

Reference to a book:

[3] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[4] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[5] Cancer Research UK, *Cancer statistics reports for the UK*. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [6] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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### *List of keywords*

#### A. PROCESSING

Acceleration  
Bleeding  
Calorimetry  
Curing  
Dispersion  
Drying  
Fineness  
Fresh Concrete  
Grinding  
Humidity  
Hydration  
Kinetics  
Microwave Processing  
Mixture Proportioning  
pH  
Reaction  
Retardation  
Rheology  
Temperature  
Thermal Treatment  
Vibration  
Workability

#### B. STRUCTURE, MICROSTRUCTURE, CHARACTERIZATION

Amorphous Material  
Backscattered Electron Imaging  
Calcium-Silicate-Hydrate (C-S-H)  
Characterization  
Crack Detection  
Crystal Size  
Crystal Structure  
EDX  
Glass  
Hydration Products  
Image Analysis  
Interfacial Transition Zone  
Mercury Porosimetry  
Microcracking  
Microstructure  
Particle Size Distribution  
Petrography  
Pore Size Distribution  
Pore Solution

SEM  
Small-Angle X-Ray Scattering  
Spectroscopy  
Surface Area  
Surface Layer  
TEM  
Thermal Analysis  
Thermodynamic Calculations  
X-Ray Diffraction

#### C. PROPERTIES

Adsorption  
Aging  
Alkali-Aggregate Reaction  
Bending Strength  
Bond Strength  
Carbonation  
Compressive Strength  
Corrosion  
Creep  
Cycles  
Degradation  
Delayed Ettringite Formation (DEF)  
Diffusion  
Durability  
Elastic Moduli  
Electrical Properties  
Electrochemical Properties  
Expansion  
Fatigue  
Finite Element Analysis  
Fracture Toughness  
Freezing and Thawing  
Long-Term Performance  
Magnetic Properties  
Mechanical Properties  
Micromechanics  
Permeability  
Physical Properties  
Pull-Out Strength  
Shrinkage  
Stability  
Strain Effect  
Sulfate Attack  
Tensile Properties  
Transport Properties

#### D. COMPOSITION

Admixture  
Aggregate  
Alkali Activated Cement  
Alkalis  
BaO  
Blended Cement  
CdO  
Ca<sub>3</sub>Al<sub>2</sub>O<sub>6</sub>  
Calcium Aluminate Cement  
Calcium Aluminoferrite  
CaO  
Ca<sub>2</sub>SiO<sub>4</sub>

Ca(OH)<sub>2</sub>  
Ca<sub>3</sub>SiO<sub>5</sub>  
3CaO·3Al<sub>2</sub>O<sub>3</sub>·CaSO<sub>4</sub>  
CaCO<sub>3</sub>  
Cement  
Cement Paste  
Chemically Bonded Ceramics  
Chloride  
Chromium  
Clinker  
Cobalt  
Ettringite  
Filler  
Fly Ash  
Fluoride  
Fluxes  
Granulated Blast-Furnace Slag  
Heavy Metals  
High-Range Water Reducers  
Hydrogarnet  
Lead  
Lithium Compounds  
Metakaolin  
MgO  
Mineralizers  
Monosulfate  
Nitrate  
Organic Acids  
Organic Materials  
Polymers  
Portland Cement  
KOH  
Pozzolan  
Reinforcement  
Silica Fume  
Sulfate  
Sulfate Resistant Cements  
Sulfoaluminate  
Toxic Metal  
Zinc

#### E. APPLICATIONS, SPECIAL TREATMENT

Cement Manufacture  
Composite  
Concrete  
Fiber Reinforcement  
High-Performance Concrete  
Modeling  
Mortar  
Oil Well Cement  
Precast Units  
Radioactive Waste  
Refractory Cement  
Waste Management