

POSMAT I Programa de Pós-graduação em Engenharia de Materiais



Course: Cement materials science and engineering

Code: POSMAT0015

Credits: 03

Module: Specific formation

Research area: Selection, processing e characterization

Contents:

Portland cement history, Portland cement components and the relationship with their hydrated phases, Physico-chemical properties of Portland cement, Cement characterization techniques, Low carbon cements and emissions, Cement development for the sustainability of constructions and waste immobilization.

References:

1. KAREN L. SCRIVENER, VANDERLEY M. JOHN, ELLIS M. GARTNER (2016). Eco-efficient cements: Potential, economically viable solutions for a low CO₂, cement based materials industry. United Nations Environment Programme, Paris.
2. LEA, FM; HEWLETT, PC. Lea's Chemistry of Cement and Concrete. 4th ed. edited by Peter C. Hewlett. Oxford: Butterworth-Heinemann, 2001. 4th ed. edited by Peter C. Hewlett. ISBN: 9780750662567.
3. PACHECO TORGAL, F. Handbook of Recycled Concrete and Demolition Waste. Cambridge: Woodhead Publishing, 2013. (Woodhead Publishing Series in Civil and Structural Engineering). ISBN: 9780857096821.
4. TORGAL, FP. Eco-Efficient Concrete. Cambridge: Woodhead Publishing, 2013. (Woodhead Publishing in Materials). ISBN: 9780857094247.