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Journal of the European Ceramic Society 32 (2012) 2785

www.elsevier.com/locate/jeurceramsoc

Editorial

Symposium on Silicates, Refractories, Cements and Traditional Ceramics

Globalisation has long been shifting the production sites of most industrial and traditional ceramics subsectors to emerging countries. The strong impact of economic recession has further accelerated this process, in particular in materials for the construction industry. Despite this context, Europe is still leading every process directed at enhancing product value, driving R&D in all areas, ranging from design to decoration, from new products to new applications, in increasing contact with many other fields of research in advanced materials.

In order to maintain this leadership, however, the traditional ceramic industry needs to continuously evolve and address the challenges entailed in raising its competitiveness and sustainability. Examples of such major challenges include: increasing the added value of materials by incorporating novel functionalities or enhancing existing ones, reducing the embedded energy of new materials, smart manufacturing, using renewable energies, and eco-design. The symposium sought to review the state of the art of traditional ceramics and cements and, above all, to lay the groundwork that will enable these industries successfully to address the major changes that are already occurring.

The symposium included the typical topics related to materials belonging to the general category of traditional ceramics, such as floor and wall tiles, whitewares (e.g. tableware and sanitaryware), heavy clay products and refractories, as well as cements and binding materials. New raw materials and additives for manufacturing these types of materials were also well represented. Contributions were also made to emerging research lines, such as eco-designed products, energy saving, and the use of renewable energies, while multifunctional coatings and geopolymers were particularly visible during the symposium.

This section of the ECers XII Special Issue on Traditional Ceramics comprises a collection of peer-reviewed papers on the different materials making up the traditional ceramics field, in addition to papers on emerging research lines.

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