



**UNIVERSITÀ
DI TRENTO**

**Dipartimento di
Ingegneria Industriale**

DII

Seminar



Glass Research activities at LaMaV, São Carlos, Brazil

Classical and non-classical crystallization of Nasicon structures and resulting ionic conductivity

8th October 2024, h. 11:30

Seminar room, Polo Ferrari 2 - Via Sommarive 9, Trento

**Speaker: Prof. Ana Candida M. Rodrigues, Department of Materials Engineering
Federal University of São Carlos - Brazil**

After briefly presenting the Department of Materials Engineering of UFSCar/ São Carlos /Brazil, the Laboratory of Vitreous Materials – LaMaV, and the Center for Research Technology and Vitreous Materials (CeRTEV), we will discuss features of some of the Nasicon structured glass-ceramics, to be applied as solid electrolytes in solid-state batteries. Indeed, Nasicon structures are composed of octahedra linked by corners to tetrahedra. This structure generates open channels in which alkali ions may move with low activation energy, therefore enabling a high ionic conductivity. Because of their wide composition range, those materials may be obtained by the glass-ceramics route, which presents some advantages over the solid-state reaction. The newly proposed flash-crystallization route will also be discussed.

Info

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