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Surface characterization of a type of tropical wood: Tzalam

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For centuries wood has been widely used both as structural and decorative material in buildings and furniture. However, one of its disadvantages is its high combustibility, which is determined by its composition. The low-flammability of wood materials will contribute greatly to their applications. Tzalam (Lysiloma latisiliquum) is a wood native of tropical forest in Yucatan Peninsula of southeast of Mexico. It is classified as a highly resistant, manageable and pleasant hard wood. It is widely used as furniture, construction (indoor decoration), floorboard, coatings, kitchen, etc.

The aim of this study is to present a detailed characterization of the principal properties of Tzalam wood, using different methods for analysis: FTIR spectroscopy, thermogravimmetry (TG), differential scanning calorimetry (DSC), X-ray photoelectron spectroscopy (XPS), small-angle X-ray scattering (SAXS) and laser flash method, to identify its principal thermal properties as thermal diffusivity, thermal conductivity and thermal effusivity.

Biography

M.A. Estrella-Gutierrez has a Master in Science degree and now he is Ph.D. student of Physical Chemistry at CINVESTAV-IPN, Merida, Mexico.

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