

II. ΗΑΦΤΟΧΙΜΙΑ (PETROCHEMISTRY)

BRITTLENESS OF MATERIALS IN RELATION TO OTHER PROPERTIES

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The term “brittleness of materials” has been in use for a long time by scientists, engineers and laymen alike, along with such terms as “material strength” [1, 2]. However, there was no quantitative definition of brittleness until 2006 [3]. The definition is as follows:

$$B = 1/(\varepsilon_b E') \quad (1)$$

Here ε_b is the tensile elongation at break while E' is the storage modulus at 1.0 Hz determined by dynamic mechanical analysis (DMA) [4, 5], all quantities pertaining to a specified temperature.

In earlier work we have established [3, 6] that B is related to the viscoelastic recovery in scratch testing. We have now demonstrated a new connection, namely between B and the Charpy impact strength. These and related developments will be presented.

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BIOENGINEERING IN THE XXIST CENTURY: THE ROLE OF NANOTECHNOLOGY

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A brief historical overview of bioengineering as an independent discipline will be offered, emphasizing the role of f different technical breakdowns, such as semiconductors, liquid crystals, etc. Then, the main challenges, that this very active are of R&D faces, will be discussed. The role that Nanotechnology can play as the next generation of bioengineered devices will be analyzed, through some actual examples, ranging from drug delivery technologies to MEMS (Micro ElectroMechanical Systems)

CATALYTIC COMPLEXES IN THE PETROLEUM RESINS SYNTHESIS PROCESSES. USING. PROPERTIES

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Utilization of petrochemical processes wastes, transformation of wastes components in new synthetic compounds has been investigated. As is