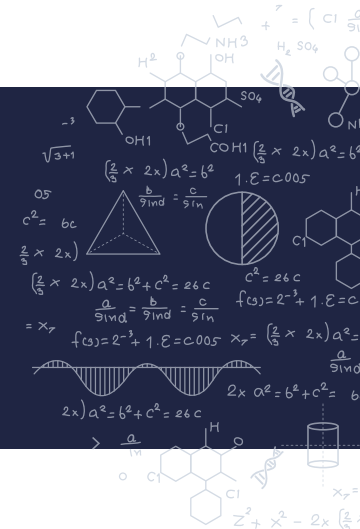


LICENSING OPPORTUNITY: ANALYTE PROBE AND DETERMINING WATER VAPOR TRANSMISSION RATE



DESCRIPTION

Problem

Conventional industrial methods are limited to Water Vapor Transmission Rate (WVTR) ranges larger than 10^{-4} g/m²/24 h. The two most common research grade procedures, the Tritium Radioactive Technique and the Optical-Electrical Calcium Degradation Test are capable of measuring Moisture Vapor Transmission Rate (MVTR) to within 10^{-6} g/m²/24 h.

Invention

Our method is based on direct electronic interactions between graphene and water at the molecular level, thus is capable of measuring MVTR to within 10^{-8} g/m²/24 h.

BENEFITS

Commercial Application

Our method can be used to evaluate protective barrier materials directly for the most demanding applications, for example, for 2D nano-scale electronics, pharmaceuticals and other moisture sensitive materials. In addition, the method is very easy to use in a typical lab environment.

Competitive Advantage

Pharmaceuticals, Biomedicals, Food, and Electronics are moisture sensitive and require protective packaging materials with increasingly improved WVTR to achieve the required quality, safety and shelf life.

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