ABSTRACT Smart materials encompass a variety of substances, including smart antimicrobial peptides, pit and fissure sealants, impression materials, cement, and sutures.These technological breakthroughs indicate the initiation of the biosmart dentistry era, hence progressing toward its actualization.KEYWORDS: Ideal material, smart dentistry, smart materials INTRODUCTION Historically, there was a prevailing belief that oral materials intended for extended usage would exhibit greater durability if they possessed a "passive" nature, devoid of any interactions with their immediate environment. The durability of materials such as amalgams, composites, and cement in relation to their resistance to chemical reactions inside the oral environment is a topic that is often contemplated. The application of "bioactive" intelligent materials is presently regarded as a very promising technology with the potential for enhanced durability and heightened efficacy over extended periods.[1] A substance can be classified as "intelligent" when it exhibits a notable capacity to perceive and respond to alterations in its surrounding environment.Consequently, these constituents are frequently denoted as "responsive materials." When exposed to external stimuli including temperature, moisture, stress, pH, and electric or magnetic fields, smart materials are able to experience considerable changes in their properties.[2] Intelligent dental supplies have been upgraded. Restorative technologies such as smart composites, as well as other smart materials such as impression materials, shape memory alloys (SMAs), burs, and sutures have completely changed the dental industry. This article emphasizes using "smart materials" in dentistry to maximize traditional dental operations.[2] [Table 1] Table 1.Categorization of several dental smart materials Classification of Dental Smart Materials[3] Passive Dental Smart Material Active Dental Smart Material Kind of materials reacts to the environment without influencing it, for example, composites, GIC, and compomers The feedback loop mechanism is utilized in the production of these goods.ACP–releasing pit and fissure sealant and SmartBur are some examples of smart materials Open in a new tab PROPERTIES OF SMART DENTAL MATERIALS[2,3] Thermochromic materials: They adapt their color to temperature changes.These constituents signify the commencement of a novel era or epoch in the field of smart dentistry and exhibit the potential for enhanced efficacy in the future.Hence, the incorporation of intelligent materials and the use of strategic thinking have become imperative in the field of dentistry for the execution of routine clinical protocols.These materials can change properties under specific stimuli such as temperature, stress, moisture, pH, or electric and magnetic fields.Piezoelectric: It generates an electric current in response to the application of mechanical .tension.Photochromic materials: Light changes the color of these compounds