

Conductive polymer composites for managing Bruxism Intelligently

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There is major challenges exist in accurately diagnosing the disorder that is known as bruxism (clenching of the teeth) [1]. Currently the disorder is measured by clinical questionnaires and dental examinations. An intra-oral device was proposed, whereby a conductive polymer sensor was used to measure the forces involved during bruxism. Various carbon based fillers were evaluated along with selected polymer matrices to produce sensor materials that fit the specifications for an intra-oral end application.



Figure 1: Multi Sensor Smart Splint device in hard and soft splint

References

- [1] 1. Russell Lang, Pamela J. White, Wendy Machalicek, Mandy Rispoli, Soyeon Kang, Jeannie Aquilar, Mark O'Reilly, Jeff Sigafos, Giulio Lancioni, Robert Didden, Treatment of bruxism in individuals with developmental disabilities: A systematic review, *Research in Developmental Disabilities*, Volume 30, Issue 5, September-October 2009, Pages 809-818

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