



## Technologies in Dental Materials in Tokuyama Dental Corporation

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Dental adhesives are widely used in restorative dentistry and there still is needs for the simplification of procedure and versatility of clinical applications. In recent years, universal bonding agents with various specifications have been introduced by each manufacturer and the convenience in handling and versatility of clinical procedures are improving day by day.

However, the one-step one-bottle type universal bonding agents still have some challenges. For example, it is hard to stably store the silane coupling agent in one-bottle type universal bonding agents, because silane coupling agent react with acidic monomers in the bonding agent. Or, chemical polymerization might be insufficient when universal bonding agents containing acidic monomers are applied in combination with resin cement or resin core materials by chemical polymerization, because chemical initiator such as BPO / amine system is inhibited under acidic condition.

In this lecture, I will introduce how technologies in Tokuyama Dental Corporation such as adhesive monomers and initiator are utilized in the development of Tokuyama's adhesive materials including Tokuyama Universal Bond (Japanese brand name: BONDMER LIGHTLESS) to achieve the goal of 'true universal bonding agent', improving the convenience and versatility in clinical applications.

I will also introduce recent improvement in shade adaptation technologies in resin composite by introducing OMNICHROMA with Smart Chromatic Technology.

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### <Curriculum Vitae>

- 1995 Graduated University of Tokyo
- 1997 Master's degree in Engineering at University of Tokyo
- 1997 Joined Tokuyama Corporation
- 1999 Tsukuba Research Laboratory in Tokuyama Dental Corporation
- 2019 Marketing Department in Tokuyama Dental Corporation
- 2022 Degree of Doctor of Philosophy in Dental Science in Hokkaido University