POLYMERIC/OLIGOMERIC PHOTOINITIATORS

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In the last years, the design and development of new photoinitiators (PIs) is gaining market interest due to the large amount of photoinitiators that have been banned or are going to be banned as toxic or reprotoxic. In particular, the reactivity to LED lamps was one of the main characteristics wanted as well as the low post-cure yellowing.

For sensitive applications, such as food packaging, other then good reactivity and lower yellowing also low migration of the photoinitiators into the food is required.

In this regard, polymeric/oligomeric and acrylated photoinitiators were extensively explored to give the best performances in migration conditions.

Several efforts were made in our lab in developing novel classes of polymeric/oligomeric photoinitiators able to reach the limit of zero migration and showing increased performance under LED lamps (more preferably in the range of 350-400 nm) as well as a low post-cure yellowing.

In this poster, we will present the reactivity of a new class of polymeric PIs. The reactivity of the novel compounds was evaluated in clear and pigmented compositions, giving enhanced performance compared to the current commercial compounds.