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## Real time study of amalgam formation and mercury adsorption on thin gold film by Total Internal Reflection Ellipsometry

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### Highlights

- [Total internal reflection ellipsometry \(TIRE\) has been utilized to reveal percentage composition of mercury in amalgam surface layer.](#)
- [The percentage composition of amalgam layer has been characterized by using EMA Bruggemann model](#)
- The real time TIRE analysis have shown that method can detect 0.6% of mercury on the gold surface Structural analysis have shown that amalgam layer had dendritic structure

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