

## Synthesis and physico-chemical properties of gold nano-particles covered with mesogenic benzenethiol derivatives

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We have reported that synthesis and mesogenic properties of several liquid crystal materials incorporating a benzenethiol derivatives.<sup>1,2)</sup> In this study, we describe that synthesis and mesogenic properties of benzenethiol derivatives (compounds **1** and **2**). Compound **2** shows monotropic smectic and nematic phases, while compound **1** is non-mesogenic.

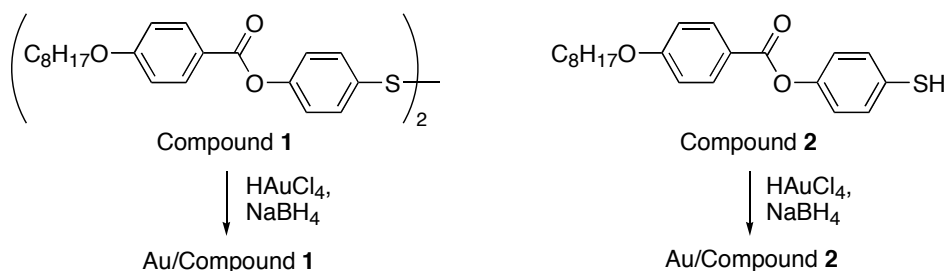


Figure Preparation of Au/compound **1** and Au/compound **2**

Au nano-particles covered with compound **1** or **2** are prepared as shown in Figure and their physico-chemical properties are also examined using UV-Vis spectra, DSC, TEM, and XRD observations. These results are discussed in terms of molecular structure of compounds **1** and **2**.

### Acknowledgement

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### References

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- 2) H. Okamoto, V. F. Petrov, and S. Takenaka, *Liquid Crystals*, 1999, **26**, 691.