

Materials List for

# Single-Molecule Surface-Enhanced Raman Scattering Measurements Enabled by Plasmonic DNA Origami Nanoantennas

Amr Mostafa<sup>1</sup>, Yuya Kanehira<sup>1</sup>, Anushree Dutta<sup>1</sup>, Sergio Kogikoski Jr.<sup>1</sup>, Ilko Bald<sup>1</sup>

<sup>1</sup>Institute of Chemistry, University of Potsdam

## Corresponding Author

Ilko Bald

bald@uni-potsdam.de

## Citation

Mostafa, A., Kanehira, Y., Dutta, A., Kogikoski Jr., S., Bald, I. Single-Molecule Surface-Enhanced Raman Scattering Measurements Enabled by Plasmonic DNA Origami Nanoantennas. *J. Vis. Exp.* (197), e65310, doi:10.3791/65310 (2023).

## Date Published

July 21, 2023

## DOI

10.3791/65310

## URL

jove.com/video/65310

## Materials

| Name  | Company                  | Catalog Number | Comments |
|---|--------------------------|----------------|----------|
| 100 kDa MWCO Amicon filters, 0.5 mL                         | Merck                    | UFC5100BK      |          |
| 10x TAE buffer (0.4 M Tris, 0.2 M acetic acid, 0.01 M EDTA) | SIGMA Aldrich            | T9650          |          |
| 60 nm goldspheres, bare (citrate)                           | NanoComposix             | AUCN60         |          |
| ACCESS-NC-A AFM probes                                      | SCHAEFER-TEC             |                |          |
| Agarose powder  | SIGMA Aldrich            | 9012-36-6      |          |
| AuNP DNA coating strands                                    | IDT                      |                |          |
| AuNP DNA coating strands (TAMRA)                            | SIGMA Aldrich            |                |          |
| Glycerol  | SIGMA Aldrich            | 56-81-5        |          |
| Heraeus Fresco 17 centrifuge                                | Thermo Fisher Scientific |                |          |
| HORIBA OmegaScope with a LabRAM HR evolution                | HORIBA                   |                |          |
| Magnesium chloride  | SIGMA Aldrich            | 7786-30-3      |          |
| Nanofork DNA bridge strand (TAMRA)                          | Metabion                 |                |          |
| Nanofork DNA staple strands                                 | SIGMA Aldrich            |                |          |
| ParafilmM   | Carl Roth                | CNP8.1         |          |
| Primus 25 Thermocycler                                      | Peqlab/VWR               |                |          |
| Silicon wafer   | Siegert wafer            | BW14076        |          |
| Single-stranded scaffold DNA, type p7249 (M13mp18)          | Tilibit nanosystems      |                |          |
| TCEP solution   | SIGMA Aldrich            | 51805-45-9     |          |