

Materials List for:

Preparation of Liquid-exfoliated Transition Metal Dichalcogenide Nanosheets with Controlled Size and Thickness: A State of the Art Protocol

Claudia Backes¹, Damien Hanlon², Beata M. Szydłowska², Andrew Harvey², Ronan J. Smith², Thomas M. Higgins¹, Jonathan N. Coleman²

¹Chair of Applied Physical Chemistry, Ruprecht-Karls University Heidelberg

²School of Physics and CRANN, Trinity College Dublin

Correspondence to: Claudia Backes at backes@uni-heidelberg.de

URL: <https://www.jove.com/video/54806>

DOI: [doi:10.3791/54806](https://doi.org/10.3791/54806)

Materials

Name	Company	Catalog Number	Comments
Sodium cholate hydrate, from ox and/or sheep bile	Sigma Aldrich	C1254-100G	Surfactant used as stabilizer in the form of an aqueous solution (<i>i.e.</i> , after dissolving the powder in millipore water)
MoS ₂ powder	Sigma Aldrich	69860-100G	Other distributors available, but exfoliation and outcome of size selection can vary
WS ₂ , powder 2 µm	Sigma Aldrich	243639-50G	Other distributors available, but exfoliation and outcome of size selection can vary
ImageJ Software	Developer: National Institutes of Health	64-bit Java version 2.45 1.6.0_24	Image processing software used for TEM analysis, free download
Gwyddion Software	Developer: Czech Metrology Institute	64-bit Java version 2.45	Image processing software used for AFM analysis, free download
Origin Pro Software	OriginLab	Version 2016	Software used for data analysis such as differentiation and fitting of the extinction spectra
Centrifuge	HettichLab	Mikro 220R	any other benchtop centrifuge is suitable
Rotor 1	Hettich	Rotor 1016	for centrifugation <5,000 x g
Rotor 2	Hettich	Rotor 1195-A	for centrifugation >5,000 x g