

## - Technical Data Sheet -

### Sixonia Tech E-Graphene Dispersion G-DISP-H2O-CSO-2

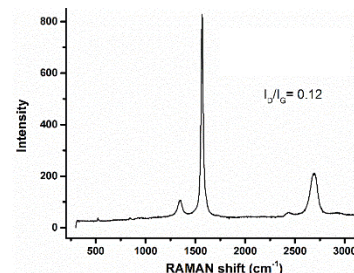
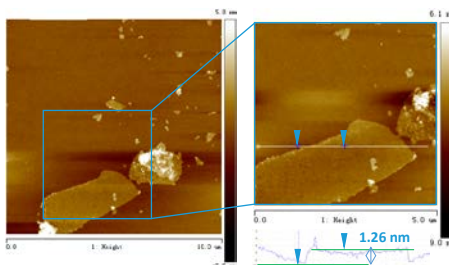
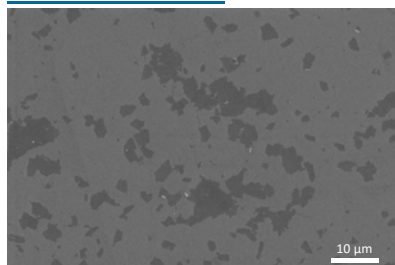
#### Description:

Sixonia Tech's E-Graphene Dispersion G-DISP-H2O-CSO-2 is a dispersion of functionalized, electrochemically exfoliated graphene in water at a concentration of 2 mg/ml without surfactants or other additives. E-Graphene CSO is a few-layer graphene with large lateral size, low level of in-plane-defects and high conductivity, stabilized in dispersion via negative surface charges.

#### Properties:

<b>Form:</b>	<b>Few-layer graphene dispersion</b>	
<b>Colour:</b>	<b>black</b>	
<b>Odour:</b>	<b>odourless</b>	
<b>Solvent:</b>	<b>water</b>	
<b>Graphene Concentr.:</b>	<b>≤ 0.2 wt.-% (≤ 2 mg/ml)</b>	(gravimetric)
<b>Additives/Binders:</b>	<b>0 wt.-% (0 mg/ml)</b>	(not used/needed)
<b>Average lateral size:</b>	<b>1-2 μm</b>	(from SEM & AFM)
<b>Average thickness:</b>	<b>1-5 atomic layers</b>	(from AFM)
<b>pH:</b>	<b>3-4</b>	(adjustable on demand)
<b>Zeta Potential:</b>	<b>-35 mV @ pH 3 to -60 mV @ pH 10</b>	
<b>Conductivity (bulk):</b>	<b>&gt; 400 S/cm</b>	(4-Point-Probe & SEM on
<b>Resistivity (bulk):</b>	<b>&lt; 2.5·10<sup>-3</sup> Ωcm</b>	as-made film, no post-treat-
<b>Sheet resistance:</b>	<b>&lt; 1 Ω/□ @ 25μm</b>	ment needed)
<b>Raman D/G-ratio:</b>	<b>0.1-0.2*</b>	(from Raman)*
<b>C/O ratio:</b>	<b>~20</b>	(from XPS)

#### Characterization:



\*: Raman D/G-ratio measured on large single flake level, averaging over large area or bulk film may give different ratio

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