

## Supporting Information

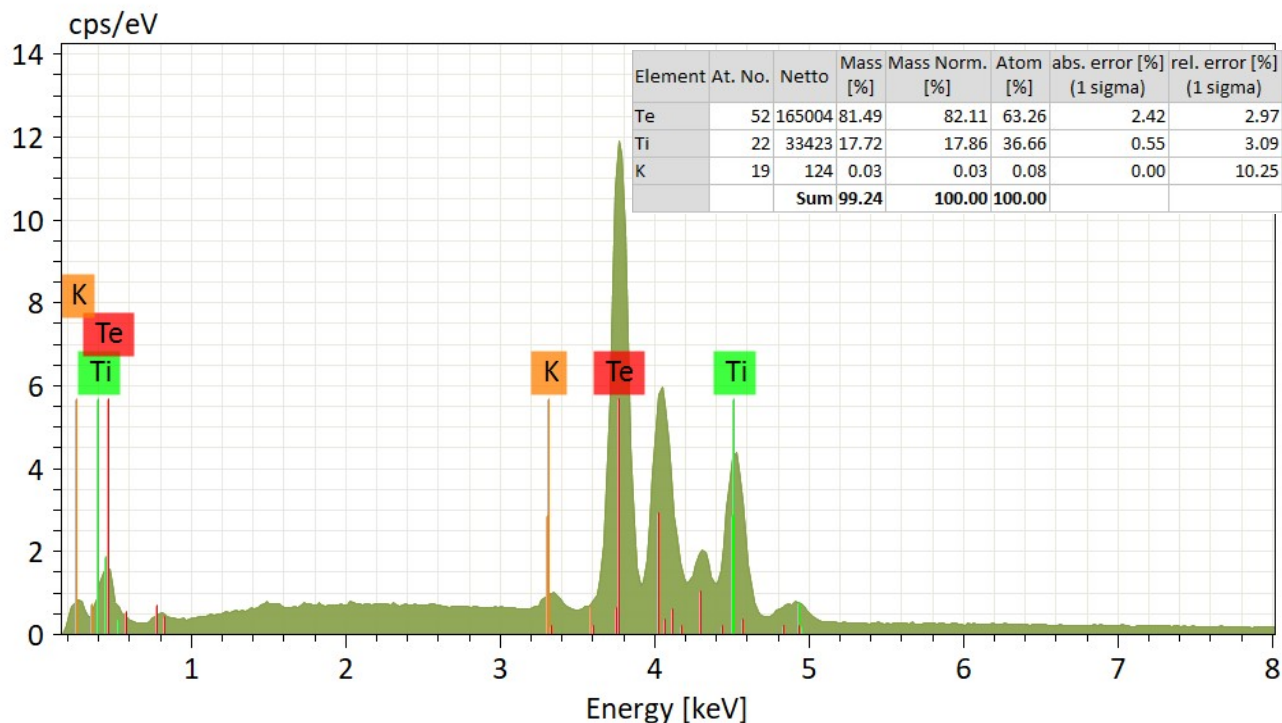
# Single crystal growth of layered metallic materials $\text{TiTe}_2$ based on a polytelluride flux method

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**Fig. S1** The EDS spectrum of  $\text{TiTe}_2$  from polytelluride flux in this work.

**Table. S1** Work functions of the VB group TMDs reported in previous literatures.

Sample	Work function (eV)	methods	reference
$\text{VS}_2$	4.37	KPFM* <sup>1</sup>	[1]
1T- $\text{VSe}_2$ (bulk)	5.76	TCS* <sup>2</sup>	[2]
1T- $\text{VSe}_2$ (monolayer)	5.52	TCS	[3]
$\text{NbSe}_2$	5.9	UPS* <sup>3</sup>	[4]
$\text{NbS}_2$	4.75~4.9	UPS	[5]
1T- $\text{TaS}_2$	5.7	TCS	[6]

KPFM\*<sup>1</sup>: Kelvin probe force microscopy

TCS\*<sup>2</sup>: Target-current spectroscopy

UPS\*<sup>3</sup>: Ultraviolet photoelectron spectroscopy

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