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1 **Bismuth Oxychloride/MXene Symmetric Supercapacitor with High Volumetric Energy**
2 **Density**

3 Qi Xun Xia^{a,†}, Nanasheb. M. Shinde^b, Je Moon Yun^{b,†}, Tengfei Zhang^b, Rajaram S. Mane^c,
4 Sanjay Mathur^{d,*} and Kwang Ho Kim^{a,b,c,*}

5
6 ^a*School of Materials Science and Engineering, Pusan National University, 2 Busandaehak-ro*
7 *63beon-gil, Geumjeong-gu, Busan 46241, Republic of Korea*

8
9 ^b*Global Frontier R&D Center for Hybrid Interface Materials, Pusan National University, 2*
10 *Busandaehak-ro 63beon-gil, Geumjeong-gu, Busan 46241, Republic of Korea*

11 ^c*National Core Research Center, Pusan National University, 2 Busandaehak-ro 63beon-gil,*
12 *Geumjeong-gu, Busan 46241, Republic of Korea.*

13 ^d*Department of Chemistry, Chair of Inorganic and Materials Chemistry, Cologne University,*
14 *Cologne 50939, Germany*

15
16 [†] *These authors contributed equally to this work.*

17 * Email: kwhokim@pusan.ac.kr, sanjay.mathur@uni-koeln.de

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19 *Keywords:* BiOCl; Ti₃C₂T_x; MXene; symmetric supercapacitors; volumetric energy density

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21 **ABSTRACT**

22 Since the discovery of two-dimensional (2D) graphene, a new class of 2D materials with
23 excellent electrical conductivity has recently been attracting attention in studying promising
24 electrode materials in energy storage applications. Herein, bismuth oxychloride nanosheets-
25 immobilised Ti₃C₂T_x MXene material (TCBOC) is synthesised by a facile and cost-effective
26 chemical bath deposition (CBD) route. The bismuth oxychloride (BiOCl) nanosheets are grown
27 and immobilised on surfaces of Ti₃C₂T_x-MXene flakes. An electrode based on the TCBOC
28 nanocomposite exhibited a remarkably volumetric specific capacitance of 396.5 F cm⁻³ at 1 A g⁻¹
29 and 228.0 F cm⁻³ at 15 A g⁻¹. Furthermore, a symmetric supercapacitor (SSC) assembled using
30 TCBOC material proves to have a high energy density of 15.2 Wh kg⁻¹ at a power density of
31 567.4 W kg⁻¹ compared to SSCs using previously reported Ti₃C₂T_x MXene materials. The SSC

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