

X-ray Crystallography

Single-crystal X-ray diffraction data of **3i** were collected at 100 K on Rigaku AFC12 goniometer equipped with an enhanced sensitivity (HG) Saturn 724+ detector mounted at the window of an FR-E+ Superbright MoK α rotating anode generator with HF Varimax optics [1].

Unit cell parameters were refined against all data. An empirical absorption correction was carried out using CrystalClear [2] software.

The crystal structure of **3i** was solved by direct methods and refined on F_o^2 by full-matrix least-squares refinements using programs of the SHELX-2013 software [3]. All non-hydrogen atoms were refined with anisotropic displacement parameters. All hydrogen atoms were added at calculated positions and refined using a riding model with isotropic displacement parameters based on the equivalent isotropic displacement parameter (U_{eq}) of the parent atom.

Crystallographic data (excluding structure factors) for the structures in this paper have been deposited with the Cambridge Crystallographic Data Centre; CCDC deposition number 978247 contains the supplementary crystallographic data for this paper. This data can be obtained free of charge from The Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/data_request/cif.

Table S1. Crystal data and structure refinement details for crystal structure of **3i**.

| | | |
|--|--|----------------------------|
| Empirical formula | $C_{20}H_{17}BrN_2O_5$ | |
| Formula weight | 445.26 | |
| Temperature | 100(2) K | |
| Wavelength | 0.71075 Å | |
| Crystal system | Triclinic | |
| Space group | $P-1$ | |
| Unit cell dimensions | $a = 8.9971(4)$ Å | $\alpha = 70.132(5)^\circ$ |
| | $b = 10.0949(4)$ Å | $\beta = 68.095(5)^\circ$ |
| | $c = 11.5631(8)$ Å | $\gamma = 80.935(6)^\circ$ |
| Volume | $915.83(9)$ Å ³ | |
| Z | 2 | |
| Density (calculated) | 1.615 Mg / m ³ | |
| Absorption coefficient | 2.280 mm ⁻¹ | |
| $F(000)$ | 452 | |
| Crystal | Plate; Colourless | |
| Crystal size | $0.240 \times 0.200 \times 0.040$ mm ³ | |
| θ range for data collection | $3.194 - 27.477^\circ$ | |
| Index ranges | $-11 \leq h \leq 11, -13 \leq k \leq 13, -14 \leq l \leq 14$ | |
| Reflections collected | 12120 | |
| Independent reflections | 4167 [$R_{int} = 0.0244$] | |
| Completeness to $\theta = 25.242^\circ$ | 99.6 % | |
| Absorption correction | Semi-empirical from equivalents | |
| Max. and min. transmission | 1.000 and 0.672 | |
| Refinement method | Full-matrix least-squares on F^2 | |
| Data / restraints / parameters | 4167 / 0 / 255 | |
| Goodness-of-fit on F^2 | 1.082 | |
| Final R indices [$F^2 > 2\sigma(F^2)$] | $R1 = 0.0257, wR2 = 0.0675$ | |
| R indices (all data) | $R1 = 0.0273, wR2 = 0.0684$ | |
| Extinction coefficient | n/a | |
| Largest diff. peak and hole | 0.455 and -0.431 e Å ⁻³ | |

¹ S.J Coles and P.A. Gale, (2012) Chemical Science, (3), 683-689.

² CrystalClear-SM Expert 3.1 b26 (Rigaku, 20112).

³ SHELX-2013 - G. Sheldrick, G.M. (2008), Acta Cryst. A64, 112-122.