Acta Crystallographica Section E
Structure Reports Online
ISSN 1600-5368

2-Phenylimidazo[1,2-*a*]pyridine-3-carbaldehyde

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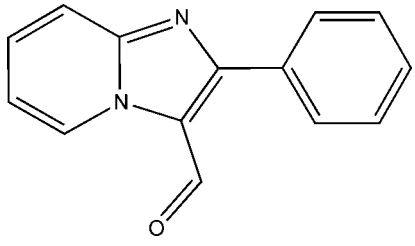
Received 8 April 2008; accepted 21 April 2008

Key indicators: single-crystal X-ray study; T = 120 K; mean σ(C–C) = 0.002 Å; R factor = 0.032; wR factor = 0.078; data-to-parameter ratio = 14.3.

In the title compound, $C_{14}H_{10}N_2O$, the dihedral angle between the imidazo[1,2-*a*]pyridine and phenyl rings is 28.61 (4)° The molecules are connected into broad chains parallel to the *a* axis by weak C—H···O and C—H···N hydrogen bonds. The linking of the ribbons is provided by π–π stacking interactions between neighbouring pyridine rings, with a centroid–centroid distance of 3.7187 (7) Å.

Related literature

For general background, see Anaflous *et al.* (2008) and references therein. For related literature, see: Meth-Cohn & Stanforth (1991).



Experimental

Crystal data

$C_{14}H_{10}N_2O$
M_r = 222.2
Orthorhombic, *Pbca*
a = 13.0640 (3) Å
b = 7.4162 (2) Å
c = 21.6698 (6) Å
V = 2099.48 (9) Å^3
Z = 8
Mo $K\alpha$ radiation
μ = 0.09 mm^{-1}
T = 120 K
0.57 × 0.40 × 0.24 mm

Data collection

Oxford Diffraction Xcalibur2 diffractometer with Sapphire2 CCD detector
Absorption correction: none
25795 measured reflections
2196 independent reflections
1305 reflections with $I > 3\sigma(I)$
R_{int} = 0.049

Refinement

$R[F^2 > 2\sigma(F^2)]$ = 0.031
$wR(F^2)$ = 0.077
S = 1.04
2196 reflections
154 parameters
H-atom parameters constrained
$\Delta\rho_{max}$ = 0.15 e Å^{-3}
$\Delta\rho_{min}$ = −0.16 e Å^{-3}

Table 1
Hydrogen-bond geometry (Å, °).

D—H···A	D—H	H···A	D···A	D—H···A
C4—H4···N1^{i}	0.96	2.50	3.4386 (18)	165
C6—H6···O1^{ii}	0.96	2.46	3.1856 (16)	133

Symmetry codes: (i) $-x+1, -y, -z$; (ii) $-x, -y, -z$.

Data collection: *CrysAlis CCD* (Oxford Diffraction, 2006); cell refinement: *CrysAlis RED* (Oxford Diffraction, 2006); data reduction: *CrysAlis RED*; program(s) used to solve structure: *SIR2002* (Burla *et al.*, 2003); program(s) used to refine structure: *JANA2000* (Petříček *et al.*, 2000); molecular graphics: *DIAMOND* (Brandenburg & Putz, 2005); software used to prepare material for publication: *JANA2000*.

The Grant Agency of the Czech Republic is acknowledged for grant No 202/05/0757

Supplementary data and figures for this paper are available from the IUCr electronic archives (Reference: BG2180).

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