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Determination of the degree of crystallinity of polyphenylene sulfide composited with crystalline and non-crystalline fillers by applying the direct derivation method. Corrigendum

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An erroneous equation and some values of related parameters in the paper by Toraya [*J. Appl. Cryst.* (2024), **57**, 1115–1126] are corrected.

In the paper by Toraya (2024), the first equation in equations (17) on page 1118 was erroneously given. The disorder factor D, defined by $D = \exp\left[-d(2\sin\theta/\lambda)^2\right]$, should not be a multiplier but a divider. The correct equation is given by

$$Y_{P\_C}^{T\_n}(d) = \int_{2\theta_L}^{2\theta_{T\_n}} y(2\theta)_{P\_C}^{obs} \left\{ \exp\left[-d\left(\frac{2\sin\theta}{\lambda}\right)^2 \right] \right\}^{-1} G(2\theta)\,\mathrm{d}(2\theta).$$

Since $\left[\exp\left(-dx^2\right)\right]^{-1} = \exp\left(dx^2\right)$ and d is optimized together with the degree of crystallinity, D_0, during the minimization of the cost function S [equation (18)], the influences on the derived D_0 values were considered to be small. The D_0 and d parameters were recalculated with the correct equation, and they are given in Table 1. The differences in d values between the two calculations were, in this case, very small. Actually, the individual $\overline{D_0}$ values were almost unchanged, and their differences from the previous ones were within ±0.1%.

References

Toraya, H. (2024). *J. Appl. Cryst.* **57**, 1115–1126.

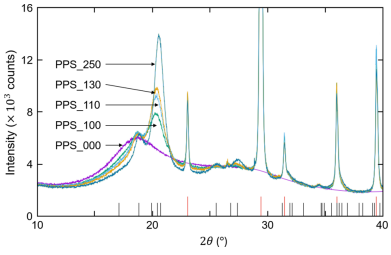

Table 1
Corrected D_0 and d values.

Sample	Ranges	PPS_100	PPS_110	PPS_130	PPS_250
$\overline{D_0}$ (%)	R1	22.2	28.6	30.9	43.4
	R2	22.1	28.5	30.8	43.3
	R3	22.0	28.3	30.6	43.2
$\bar{d}$ (×100)	R1	0.2023	−0.1466	−0.0494	0.3778
	R2	0.1995	−0.1530	−0.0503	0.3781
	R3	0.2027	−0.1270	−0.0568	0.3907