ERRATA

Erratum: Analytic Born completion in the calculation of electron-molecule differential cross sections
[Phys. Rev. A 53, 4215 (1996)]

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Due to an error [1] in Eq. (13) of this paper, several subsequent equations contain errors. The following equations replace those in the original paper:

$$f_{lm,l_0m_0}(k_0;\hat{R}) = \frac{ik_0}{4\pi^2}\sum_{\Lambda} D^l_{m\Lambda}(\hat{R})T^{\Lambda}_{ll_0}D^{l_0*}_{m_0\Lambda}(\hat{R}), \tag{13}$$

$$\frac{d\sigma}{d\Omega}(\theta,k_0) = \frac{1}{4k_0^2}\sum_{ll_0=0}^{l_{\max}}\sum_{l'l'_0=0}^{l_{\max}}\sum_{\Lambda\Lambda'}\sum_L d_L(ll_0\Lambda,l'l'_0\Lambda')T^{\Lambda}_{ll_0}T^{\Lambda'*}_{l'l'_0}P_L(\cos\theta) + [F_0(\theta)]^2 + \tfrac{1}{5}\sum_{m=-2}^{2}[F_2^m(\theta)]^2$$

$$+ \frac{1}{k_0}F_0(\theta)\sum_{l=0}^{l_{\max}}\sum_{\Lambda}\text{Im}(T^{\Lambda}_{ll})P_l(\cos\theta) + \frac{2\pi^{1/2}}{k_0}\sum_{ll_0=0}^{l_{\max}}\sum_{m\Lambda}F_2^m(\theta)c(ll_0m\Lambda)\text{Im}(T^{\Lambda}_{ll_0})Y_{lm}(\hat{k}), \tag{14}$$

$$F_0(\theta) = \frac{\alpha_0\pi q}{4} + \alpha_0\pi k_0\sum_{l=0}^{l_{\max}}\frac{1}{(2l-1)(2l+3)}P_l(\cos\theta), \tag{15a}$$

$$F_2^m(\theta) = \sqrt{\frac{4\pi}{5}}\left(\frac{\alpha_2\pi q}{16} + \frac{2Q}{3}\right)Y_{2m}(\hat{q}) + \sqrt{4\pi}\sum_{ll_0=0}^{l_{\max}}i^{l_0-l}(-1)^m(2l+1)^{1/2}(2l_0+1)\begin{pmatrix}l & l_0 & 2\\0 & 0 & 0\end{pmatrix}\begin{pmatrix}l & l_0 & 2\\m & 0 & -m\end{pmatrix}$$

$$\times[\alpha_2 M^4_{ll_0}(k_0) + 2Q M^3_{ll_0}(k_0)]Y_{lm}(\hat{k}), \tag{15b}$$

$$c(ll_0m\Lambda) = i^{l_0-l}(-1)^{m-\Lambda}(2l_0+1)^{1/2}\begin{pmatrix}l & l_0 & 2\\m & 0 & -m\end{pmatrix}\begin{pmatrix}l & l_0 & 2\\\Lambda & -\Lambda & 0\end{pmatrix}. \tag{17}$$

Note that $\hat{k} \equiv (\theta,0)$; and for elastic scattering, $\hat{q} \equiv ((\pi-\theta)/2,\pi)$ and $q = 2k_0\sin(\theta/2)$.

As the aforementioned error affected only one of the correction terms in Eq. (14), it did not significantly affect the calculations on which the figures in the paper were based or our conclusions about the accuracy of the analytic Born completion procedure.

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[1] Y. Itikawa (private communication).