7) Hoffmann, M. und K. Rother, Makromolekulare Chemie **80**, 95 (1964).

8) Lodge, A. S., Trans. Faraday Soc. **52**, 120 (1956). Bagley, E. B. und D. C. West, J. appl. Physics **29**, 1511 (1958). Porter, R. S. und J. S. Johnson, J. appl. Polymer Sci. **3**, 200 (1960); J. appl. Physics **32**, 2326 (1961); J. Polymer Sci. **50**, 379 (1961); Trans. Soc. Rheolog. **6**, 107 (1962).

9) Bueche, F., J. Chem. Phys. **20**, 1959 (1952); **25**, 599 (1956); Physical Properties of Polymers, p. 67ff. (New York 1962).

10) Kuhn, W. und F. Grün, Kolloid-Z. **101**, 248 (1942). James, H. M. und E. Guth, J. Chem. Physics **11**, 455 (1943), 470. P. J. Flory, Principles of Polymer Chemistry, Cornell Univ. Press, 427 (1953).

11) Kuhn, W., Kolloid-Z. **68**, 2 (1934); E. Guth und H. Mark, Monatsh. Chem. **65**, 93 (1934). Lord Rayleigh, Phil. Mag. **37**, 321 (1919); S. Chandrasekhar, Revs.

Mod. Phys. **15**, 3 (1943). P. J. Flory, Principles of Polymer Chemistry, Cornell Univ. Press, 405 (1953).

12) Ishihara, A., J. Phys. Soc. Japan **5**, 201 (1950). P. Debye und F. Bueche, J. Chem. Phys. **20**, 1337 (1952). F. Bueche, Physical Properties of Polymers, 34 (New York 1962).

13) Flory, P. J., Chem. Revs. **35**, 51 (1944); Ind. Engng. Chem. **38**, 417 (1946); Principles of Polymer Chemistry, 463, Cornell Univ. Press (1953).

14) Tobolsky, A. V., Properties and Structure of Polymers, 95 (New York 1960).

15) Tobolsky, A. V. und K. Murakami, J. Polymer Sci. **40**, 443 (1959); Tobolsky, A. V., Properties and Structure of Polymers, 188 (New York 1960).

Anschrift des Verfassers

Dr. M. Hoffmann,

Wissenschaftliches Hauptlaboratorium der Farbenfabriken Bayer AG, 509 Leverkusen

Correction

of the paper

Particle Motions in Sheared Suspensions

XVIII. Wall Migration (Theoretical)

By C. E. Chaffey, H. Brenner and S. G. Mason, Montreal (Canada)

Rheol. Acta, **4** 64 (1965).

In a paper with the above title we gave a theory of migration of liquid droplets away from a wall bounding a Couette flow. However, as kindly pointed out to us by Professor A. Acrivos and Mr. N. A. Frankel of Stanford University, the solution contains certain numerical errors. These are corrected below.

We have repeated the calculation of (1), using a method less liable to error, and we find that among the numbered eq. [12, 16, 18, 19 and 21] are incorrect. Eq. [12 and 16] should read:

$$\begin{aligned} [v^0]_S - [v^0]_b &= DGb \left(i_r \frac{-10\lambda + 4}{\lambda + 1} \frac{x^2 y^2}{r^4} \right. \\ &\quad \left. + i \frac{6\lambda + 2}{\lambda + 1} \frac{xy^2}{r^3} + j \frac{4\lambda}{\lambda + 1} \frac{x^2 y}{r^3} \right) \\ [V^0]_S - [V^0]_b &= DGb \left(i_r \frac{-6}{\lambda + 1} \frac{x^2 y^2}{r^4} \right. \\ &\quad \left. + i \frac{\lambda + 7}{\lambda + 1} \frac{xy^2}{r^3} + j \frac{-\lambda + 5}{\lambda + 1} \frac{x^2 y}{r^3} \right) \\ [v^0 \cdot i_r]_S = [V^0 \cdot i_r]_S &= DGb \frac{6}{\lambda + 1} \frac{x^2 y^2}{r^4} \\ [v^0 \cdot m]_b = [V^0 \cdot m]_b &= Gb \left(\frac{4}{\lambda + 1} \frac{x^2 y^2}{r^4} + \frac{\lambda}{\lambda + 1} \frac{x^2}{r^2} - \frac{\lambda + 2}{\lambda + 1} \frac{y^2}{r^2} \right) \\ [(I - i_r i_r) \cdot (\tau^0 - \Pi^0) \cdot i_r]_S &= \eta DG \frac{41\lambda - 6}{\lambda + 1} \left(i_r \frac{2x^2 y^2}{r^4} - i \frac{xy^2}{r^3} - j \frac{x^2 y}{r^3} \right) \\ [(I - i_r i_r) \cdot (\tau^0 - \Pi^0) \cdot m]_b &= \eta G \frac{39\lambda - 4}{\lambda + 1} \left(i_r \frac{2x^2 y^2}{r^4} - i \frac{xy^2}{r^3} - j \frac{x^2 y}{r^3} \right) \\ &\quad + \eta G \frac{2\lambda - 2}{\lambda + 1} \left(i_r \frac{z^2}{r^2} - k \frac{z}{r} \right) \\ [(i_r m + m i_r) \cdot (\tau^0 - \Pi^0) \cdot i_r]_b &= \end{aligned}$$

$$= \eta G \frac{19\lambda + 16}{\lambda + 1} \left(i_r \frac{2x^2 y^2}{r^4} - i \frac{xy^2}{r^3} - j \frac{x^2 y}{r^3} \right) \quad [12]$$

$$A_{-5}^{(4)} = A_{-5} = \frac{45\lambda + 22}{45(\lambda + 1)},$$

$$A_{-3}^{(2)} = \frac{19\lambda + 16}{15(\lambda + 1)}, \quad A_{-3} = \frac{25\lambda^2 + 41\lambda + 4}{25(\lambda + 1)^2},$$

$$B_{-5}^{(4)} = B_{-5} = \frac{45\lambda + 4}{45(\lambda + 1)},$$

$$B_{-3}^{(2)} = \frac{3\lambda + 2}{5(\lambda + 1)}, \quad B_{-3} = \frac{25\lambda^2 + 31\lambda - 6}{25(\lambda + 1)^2},$$

$$C_{-4}^{(2)} = 0,$$

$$A_4^{(4)} = A_4 = -\frac{11}{18(\lambda + 1)},$$

$$A_2^{(2)} = -7 \frac{2\lambda + 3}{10(\lambda + 1)}, \quad A_2 = 7 \frac{8\lambda + 2}{25(\lambda + 1)^2},$$

$$B_4^{(4)} = B_4 = \frac{88}{63(\lambda + 1)},$$

$$B_2^{(2)} = 7 \frac{16\lambda + 19}{30(\lambda + 1)}, \quad B_2 = -21 \frac{\lambda - 1}{25(\lambda + 1)^2},$$

$$C_3^{(2)} = 0. \quad [16]$$

In eq. [18, 19 and 21] the factor $79\lambda^2 + 77\lambda + 54$ should be replaced by $54\lambda^2 + 102\lambda + 54$. The slope of the dashed line ($\lambda = 0$) in fig. 1 is thus correct, but the line in dots and dashes ($\lambda = 1.40$) should be redrawn; the correct line for $\lambda = 1.40$ intercepts the upper edge of the fig. 1.24 cm. from its left-hand margin which increases the deviation between the theory and experiment.

Reference

1) Chaffey, C. E., Brenner, H., and S. G. Mason, Rheol. Acta, **4**, 64 (1965).