

21 most influential contributions in mixing research

(in chronological order)

A list compiled based on votes from award winners and leading researchers in mixing around the world and on the occasion of the 21st anniversary of NAMF's formal affiliation with AIChE.

Published by NAMF council, October, 2011.

1. Kolmogoroff, A. N.

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Dissipation of energy in locally isotropic turbulence, *Compt. Rend. Acad. Sci. USSR*, **32**, 16–18 (1941b). Reprint in English on *Proc. R. Soc. London Ser. A*, **434**, 15-17, (1991).

2. Rushton, J. H.

Rushton, J.H., Costich, E. W. and Everett, H. J., Power characteristics of mixing impellers, *Chem. Eng. Progr.* 46, 395-404, (1950) and; 46, 467-79, (1950).

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4. Hinze, J. O.

Hinze, J. O., Fundamentals of the hydrodynamic mechanism of splitting in dispersion process, *AIChE J.* **1**, 289-295 (1955).

5. Metzner, A. B. and Otto R. E.

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6. Zwietering, T.N.

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10. Van't Riet K. and Smith, J.M.

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11. Coualaloglou , C. A. and Tavlarides L. L.

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Grace, H.P., Dispersion phenomena in high viscosity immiscible fluid systems and application of static mixers as dispersion devices in such systems, *Chem. Eng. Commun.*, **14**, 225-227, (1982).

13. Calabrese, R. V. et al.

Calabrese, R.V., Chang, T.P.K., and Dang, P.T., Drop Breakup in Turbulent Stirred Tank Contactors”, Part I: “Effect of Dispersed Phase Viscosity, *AIChE J.*, **32**, 657-666 (1986) (with Part II and Part III also voted)

14. Davies, J. T.

Davies, J. T., A physical interpretation of drop sizes in homogenizers and agitated tanks, including the dispersion of viscous oils, *Chem. Eng. Sci.*, **42**, 1671-1676 (1987).

15. Nienow, A.W. et al.

Elson, T.P., Cheesman D.J., and Nienow A.W., X-ray studies of cavern sizes and mixing performance with fluids possessing a yield stress, *Chem. Eng. Sci.*, **41**, 2555-2562 (1987). (with 4 other papers by Nienow voted)

16. Yianneskis, M. et al.

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Turbulent Mixing and Chemical Reactions, Baldyga, J. and Bourne, J. R., John Wiley & Sons, 1999.

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(with 5 other papers by Bourne and/or Baldyga also voted)

21. NAMF

Handbook of Industrial Mixing, edited by E.L., Paul, V.A, Atiemo-Obeng S. M. Kresta, Wiley-Interscience (2004).