

Author Index

Numbers in italic type indicate those pages on which references are given in full.

- Adams, E. T., Jr, 337, 369
 Aderangi, N., 90
 Adler-Nissen, J., 190, 191, 217, 219
 Affsprung, H. E., 370
 Ahuja, A. S., 300, 320, 322, 324, 325
 Aindow, J. D., 307, 325
 Alameda, E. J., 371
 Albert, A., 155, 160
 Albertsson, P. -A., 29, 30, 37, 41, 41
 Albery, W. J., 357, 369
 Alexander, A. E., 134, 135, 161, 179, 186
 Alichanidis, E., 253
 Allegra, J. R., 304, 306, 320, 321, 325
 Allen, J. E., 249, 254
 Allinson, P. A., 320, 325
 Almog, Y., 87
 Altschull, A. M., 90
 Amano, Y., 220
 Amantea, M., 370
 Ament, W. S., 297, 298, 319, 320, 325
 Amundson, C. H., 218, 219
 Anderson, D. M. W., 156, 157, 160
 Anderson, M., 223, 224, 246, 247, 249, 253, 255
 Andrade, J. D., 127, 160
 Andrae, J. H., 309, 325
 Andreatch, P., Jr, 313, 326
 Andrews, A. L., 222, 253
 Andrews, A. T., 223, 253
 Andrews, D. M., 56, 59, 63, 64, 84
 Anglemier, A. F., 218
 Aniansson, G., 52, 84
 Antonini, E., 160
 Apfel, R. E., 302, 325
 Arai, S., 191, 192, 193, 194, 207, 214, 217, 218, 219, 220
 Arbuckle, W. S., 252, 253
 Archer, M. C., 366, 367, 368, 370, 371
 Arima, S., 255
 Ash, S. G., 45, 72, 84
 Asher, R. C., 286, 325
 Aso, K., 193, 217
 Atkinson, D., 253
 Attwood, D., 191, 217
 Aubert, J. -P., 254
 Aveyard, R., 50, 51, 52, 53, 54, 84
 Backlund, S., 369
 Baker, D. W., 322, 325
 Baker, L. M., 188, 190, 220
 Baker, R. C., 190, 218, 219
 Balinov, B., 86
 Ballard, J. O., III, 327
 Ballaro, S., 320, 325
 Banks, W., 272, 273, 274, 276, 279, 281, 283
 Barbeau, W. E., 164, 186

- Barber, K. J., 190, 217
 Barclay, L. R. C., 367, 369
 Barfod, N. M., 42, 254
 Barlow, A. J., 324, 326
 Barman, B. G., 190, 218
 Barnes, I. S., 90
 Barrett-Gultepe, M. A., 321, 323, 325
 Barry, B. W., 24, 41, 202, 218
 Bass, R., 325
 Bates, R., 42
 Bean, H. S., 330, 369
 Becher, P., 43, 61, 65, 84
 Becker, E. D., 358, 370
 Beckerdite, J. M., 337, 369
 Beijerinck, M. W., 40, 41
 Bell, G. M., 63, 84
 Bellemans, A., 85
 Benga, G., 155, 160
 Benjamins, J., 41, 48, 85, 129, 130,
 131, 132, 133, 134, 135, 141, 160
 Berger, K. G., 251, 253
 Bernstein, M., 68, 89
 Berry, G. P., 254
 Berryman, J. G., 322, 325
 Bert, T., 186
 Beshkov, V. N., 78, 84
 Betscher, J. J., 60, 87
 Beuchat, L. J., 190, 218
 Beverly, T., 371
 Bigelow, C. C., 223, 253
 Bikerman, J. J., 230, 253
 Bingham, E. W., 190, 191, 218
 Biot, M. A., 301, 302, 307, 322, 325
 Bircumshaw, I., 76, 86
 Bird, R. B., 117, 121
 Birkett, R. J., 2, 24, 32, 33, 35, 41, 55,
 61, 66, 69, 85, 155, 160
 Birnholtz, J. C., 286, 325
 Bisailaon, S., 55, 86
 Biswas, B., 70, 71, 84, 142, 160
 Blokhuis, A. M., 344, 369
 Blount, H. N., 370
 Bonekamp, B. C., 160
 Bonhard, K., 218
 Bourgeois, C., 218
 Boyd, J. V., 69, 84, 142, 143, 144, 160,
 253
 Brady, J., 254
 Brash, J. L., 126, 127, 160
 Braudo, E. E., 44
 Breazeale, M. A., 309, 313, 325
 Brekke, C. J., 191, 220
 Brenner, H., 76, 78, 84, 85
 Brew, K., 223, 253
 Brickman, L. M., 45, 88
 Brignon, G., 219, 254
 Brinegar, A. C., 172, 186, 190, 218
 Briscoe, B. J., 53, 84
 Brock, C. J., 16, 41, 161
 Brooker, B. E., 225, 226, 227, 229,
 234, 236, 238, 253
 Brooks, D. E., 89
 Brooks, J. H., 52, 53, 54, 84
 Brown, J. M., 348, 369
 Bruner, J. R., 223, 254
 Brunner, J. R., 224, 254
 Bruzessi, M. R., 129-30, 160
 Buchanan, R. A., 230, 253
 Buchheim, W., 42, 235, 236, 237, 239,
 253, 254
 Buevich, Yu A., 77, 84
 Bull, B. B., 175, 186
 Bullin, S. R., 28, 41
 Burke, J. F., 369
 Burkley, T. J., 360, 369
 Burrell, K. A., 77, 84
 Busby, R., 157, 160
 Buscall, R., 22, 41
 Bushong, D. S., 369
 Butcher, D. W., 246, 254
 Butler, J. E., 254
 Buttery, R. G., 362, 363, 364, 369
 Cahn, J. W., 140, 160
 Cain, W. F., 72, 84
 Campbell, D. D., 318, 327
 Cantrell, J. H., Jr, 325
 Carbonell, R. G., 161
 Cardinal, J. R., 346, 369, 370
 Carhart, R. R., 320, 325
 Casselberry, R. L., 370
 Cassidy, H. G., 218
 Castle, J., 5, 9, 10, 35, 41, 48, 84, 136,
 142, 143, 146, 147, 149, 150, 151,
 160

- Castle, L., 360, 367, 369
 Catsimpoolas, N., 184, 186
 Cawston, T. E., 253
 Cederberg, E., 86
 Cerami, A., 189, 219
 Chan, D. Y. C., 61, 75, 84, 85
 Chang, C. M., 34, 41
 Chaplin, L. C., 7, 41
 Charles, G. E., 75, 85
 Chattopadhyay, A. K., 347, 371
 Cheeseman, G. C., 253
 Chen, E. S., 43, 53, 89
 Chen, H. J., 188
 Chen, J. -D., 76, 77, 78, 85
 Chen, L. F., 190, 218
 Cheung, E., 188
 Chiacone, E., 160
 Chiappardi, D. M., 370
 Chiba, H., 219
 Child, E. A., 190, 218
 Chilton, H. M., 7, 41
 Chivers, R. C., 307, 325
 Choi, Y. R., 190, 218
 Chothia, C., 169, 187
 Christenson, H. K., 59, 85
 Christian, S. D., 338, 345, 369, 370
 Claesson, P. M., 57, 63, 85
 Clark, D. C., 133, 134, 160
 Clifford, A. J., 219
 Clunie, J. S., 62, 85
 Cockbain, E. G., 23, 43, 71, 85
 Cohen Stuart, M. A., 13, 41, 125, 138, 160
 Colladon, J. D., 287, 325
 Cook, G. M. W., 53, 85
 Cook, J. R., 371
 Coppens, A. B., 326
 Cordoba, J., 155, 160
 Cox, R., 78, 85
 Craig, H. B., 44
 Cramer, R. D., III, 341, 369
 Crank, J., 350, 369
 Creamer, L. K., 187, 188, 222, 231, 254
 Cremers, L. F., 252, 253
 Crews, C., 370
 Crook, E. H., 53, 85
 Cumper, C. W. N., 179, 183, 186
 Custer, J. H., 193, 220
 Dagorn-Scaviner, C., 35, 41
 Dahl, K. J., 218
 Daigle, R. E., 325
 Dalgleish, D. G., 12, 13, 20, 41, 42, 43, 126, 160, 266
 Damodaran, S., 187
 Daniels, T. C., 341, 369
 Darling, D. F., 2, 24, 32, 33, 35, 41, 55, 61, 66, 69, 85, 155, 160, 225, 232, 234, 236, 246, 247, 248, 249, 254
 Davidson, W. D., 218
 Davies, D. T., 260, 261, 283
 Davies, J. T., 5, 41, 48, 52, 55, 85
 Davies, M. C., 322, 325
 Davies, R., 85, 370
 Davis, S. S., 48, 69, 85, 340, 370
 Dea, I. C. M., 155, 160
 Deeth, H. C., 230, 254
 de Feijter, J. A., 13, 16, 41, 48, 85, 129, 130, 131, 132, 133, 134, 135, 141, 160
 Defay, R., 51, 85
 de Gennes, P. -G., 72, 85
 de Groot-Mostert, A. E. A., 122
 Delaitre, J. M., 191, 218
 Del Grosso, V. A., 311, 313, 325
 de Moor, H., 249, 254
 Derjaguin, B. V., 59, 60, 77, 85
 Desmettre, S., 358, 370
 Dessy, R., 286, 327
 Determann, H., 192, 218
 de Vries, A. J., 81, 85, 102, 112, 113, 121
 Dickinson, E., 1, 3, 4, 8, 9, 10, 12, 13, 17, 19, 21, 22, 23, 26, 27, 41, 42, 46, 48, 70, 84, 85, 123, 126, 127, 135, 139, 141, 142, 143, 145, 146, 147, 148, 150, 152, 155, 157, 160, 161, 234, 254, 268, 271, 282, 283, 285, 325
 Dimitrov, D. S., 59, 76, 77, 78, 79, 82, 85, 87
 DiNardo, P. E., 80, 85
 Doerr, R. C., 362, 369
 Doi, E., 190, 219
 Dolan, A. K., 72, 85
 Donners, W. A. B., 83, 85

- Doxastakis, G., 24, 31, 42, 154, 161, 248, 254
 Dropkin, D., 131, 161
 Du Bois, M. W., 191, 218
 Dunn, W. J., III, 331, 361, 370
 Dutilh, C. E., 34, 42
 Duynes, R., van, 338, 339, 370

 Eden, D., 313, 323, 325, 327
 Ediriweera, N., 34, 44
 Edmonds, P. D., 290, 294, 295, 306, 325
 Edwards, S. F., 72, 85
 Eggers, F., 323, 325
 Eigel, W. N., 222, 254
 El Eini, D. I. D., 202, 218
 Elias, J. G., 323, 325
 Elkins, D., 370
 Epstein, P. S., 320, 325
 Erikson, S., 192, 218
 Eriksson, G., 248, 255
 Eriksson, J. C., 346, 370
 Ernststrom, C. A., 254
 Evan, E. A., 62, 66, 86
 Evans, D. F., 62, 65, 66, 67, 86, 88
 Evans, M. T. A., 160, 190, 192, 218, 253
 Everett, D. H., 84, 85, 325
 Exerova, D., 59, 86, 88
 Ezumi, K., 339, 370

 Fagerson, I. S., 192, 218
 Farrar, T. C., 358, 370
 Farrell, E. E., 286, 325
 Farrell, H. M., 218, 254
 Feeney, R. E., 163, 171, 172, 186, 187, 190, 218, 219
 Feigen, R. I., 70, 86
 Feklistov, V. N., 111, 121
 Fennema, O., 41
 Fettiplace, R., 59, 86
 Fiddler, W., 362, 369
 Fields, R., 176, 186
 Findenegg, G. H., 72, 84
 Finer, E. G., 253
 Fink, A., 247, 249, 250, 254
 Firestone, F. A., 311, 325
 Fisher, L. R., 24, 42, 48, 49, 51, 53, 55, 63, 64, 70, 83, 86, 87
 Fleer, G. J., 41, 70, 72, 86, 89, 160
 Fleming, I., 48, 86
 Fleming, M. G., 224, 254
 Florence, A. T., 43, 191, 217
 Flory, P. J., 38, 39, 42
 Fogler, H. S., 3, 27, 43
 Foley, J., 249, 254
 Ford, R. H., 254
 Fordyce, D. B., 85
 Forgacs, R. L., 313, 325
 Foster, F. K., 325
 Fox, P. F., 190, 218
 Fraaye, J. G., 160
 Franke, W. W., 223, 254
 Frankel, S. P., 77, 86, 121
 Franzen, K. L., 172, 173, 174, 186, 190, 218
 Frederick, J. R., 311, 325
 Freudenstein, C., 254
 Frey, A. R., 326
 Friberg, S., 24, 42, 66, 67, 75, 76, 86, 87
 Fry, J. C., 14, 43, 162
 Fuchs, N., 47, 86
 Fujii, J., 338, 370
 Fujii, N., 217, 220
 Fujimaki, M., 191, 192, 217, 218, 220
 Fujimoto, K., 187
 Fukushima, D., 187
 Fuller, N., 88
 Fursey, G. A. J., 326

 Garrett, E. R., 330, 370
 Garti, N., 19, 42, 55, 86, 353, 370
 Garvey, M. J., 29, 42
 Gash, B. W., 369
 Gaunaurd, G. C., 300, 301, 304, 306, 323, 325
 Geoghegan, K. F., 218
 Georges, J., 358, 370
 German, J. B., 167, 186, 187
 Gerritsma, K., 371
 Gershfeld, N. L., 63, 67, 86, 89
 Gibbs, J. W., 78, 86, 108, 121

- Gill, T. A., 190, 218
 Gillberg, G., 346, 370
 Gingell, D., 87
 Ginsberg, L., 67, 86
 Gladwell, N., 303, 304, 325, 327
 Glasstone, S., 333, 370
 Globe, S., 131, 161
 Goldblatt, L. A., 90
 Goodman, J. F., 85
 Goodwin, J. W., 41
 Gorbатов, V. M., 327
 Gorbатов, W. M., 327
 Gordon, L. G. M., 86
 Gosseft, P. W., 190, 218
 Gouw, T. H., 302, 325
 Graf, E., 238, 247, 254
 Graff, K. F., 285, 325
 Graham, D. E., 52, 53, 54, 85, 86, 127, 129, 130, 131, 136, 137, 138, 140, 141, 142, 144, 145, 146, 160, 161, 164, 165, 167, 169, 171, 186, 228, 229, 254
 Granato, A., 327
 Green, J. P., 253
 Grieser, F., 87
 Griffin, M. C. A., 154, 161
 Griffin, W. C., 11, 43
 Griller, D., 369
 Grinberg, V. Ya., 44
 Grocer, W., 34, 42
 Groninger, H. S., 190, 218
 Grosclaude, F., 219
 Grund, C., 254
 Grunden, L. P., 191, 218, 219
 Guadagni, D. G., 369
 Guay, F., 55, 86
 Gueguen, J., 41
 Gultepe, M. E., 325
 Gunning, P. A., 28, 42, 70, 86
 Gunther, R. C., 191, 218
 Gupta, P. S., 326
 Gurov, A. N., 44
 Guthrie, E. S., 255
 Gutnick, D. L., 158, 161, 162
 Gutop, Y. V., 85
 Guy, R. H., 357, 370
 Guzman, R. Z., 130, 131, 161
 Habeeb, A. F. S. A., 190, 218
 Haber, S., 78, 86
 Hadgraft, J., 369
 Hall, D. G., 45, 86
 Halling, P. J., 7, 42, 70, 86, 123, 161, 167, 177, 186, 230, 254
 Halpin, M. I., 175, 177, 187
 Hammond, K., 62, 86
 Hansch, C., 331, 341, 361, 370
 Hansen, J. R., 218
 Hansen, P. M. T., 249, 254
 Hansrani, P., 69, 85
 Haque, Z., 175, 187, 192, 218
 Hardy, W., 76, 86
 Harrison, G., 324, 326
 Hartland, S., 77, 86
 Harwalkar, V. R., 254
 Hasegawa, T., 326
 Hattori, T., 187
 Hawley, S. A., 304, 306, 320, 321, 325
 Haydon, D. A., 42, 50, 51, 52, 53, 56, 70, 71, 84, 85, 86, 89, 142, 160
 Heasell, E. L., 325
 Heid, H. W., 254
 Helbig, N., 188
 Hennes, P., 326
 Hensee, W. R., 300, 322, 325
 Hennessee, M. S. R., 42, 86
 Hermansson, A. -M., 230, 254
 Hernqvist, L., 154, 161
 Hesselink, F. Th., 59, 72, 86, 88, 90, 122
 Hestroni, G., 86
 Heymann, J. S., 325
 Heywood-Waddington, D., 371
 Hibberd, D. J., 21, 28, 42, 320, 326
 Hildebrand, J. H., 38, 42, 335, 370
 Hill, C. G., Jr, 219
 Hill, R. A. W., 48, 87
 Hill, R. J., 154, 161
 Hill, R. L., 253
 Hinz, R. S., 370
 Hirai, M., 326
 Hirao, N., 217, 220
 Hladsky, S. B., 86
 Ho, L., 188
 Hoagland, P. D., 194, 218
 Hobbs, P. V., 215, 219

- Hodgson, T. D., 77, 87
 Hofmann, C. J., 224, 254
 Hoiland, H., 369
 Hollenberg, J. S., 371
 Holme, J., 90
 Holmes, R. P., 155, 160
 Honig, E. P., 61, 75, 87
 Hood, L. F., 249, 254
 Horiuchi, T., 169, 187
 Horn, R. G., 62, 75, 84, 87
 Horne, D. S., 260, 261, 262, 264, 267, 283
 Houslay, M. D., 153, 161
 Hovem, J. M., 322, 326
 Howard, N. B., 90
 Howe, A. M., 23, 42, 86, 320, 326
 Huang, Y. T., 177, 178, 187
 Huggins, M. L., 38, 42
 Humphreys, C. W., 52, 88
 Hunter, R. J., 48, 51, 57, 60, 61, 62, 87
 Hussin, A. B. B. H., 319, 326
 Husson, F., 66, 88
 Huyskens, P., 341, 370
 Hyde, S. T., 90
- Ikawa, Y., 43
 Ikura, K., 191, 219
 Imai, E., 219
 Imaizumi, Y., 220
 Imos, L., 218
 Impey, S. J., 41
 Infante, R. B., 154, 161
 Inoue, N., 313, 315, 326
 Irons, L., 43, 160, 218, 253, 254
 Ishii, K., 220
 Israelachvili, J. N., 57, 58, 60, 62, 65, 68, 75, 87, 88
 Ito, Y., 371
 Ivanov, I. B., 77, 78, 82, 84, 85, 87, 89
 Ivey, F. J., 44
 Izmailova, V. N., 141, 146, 161
- Jackson, C. M., 88, 90
 Jackson, G., 111, 121
 Jain, R. K., 59, 77, 85, 87
 Janin, J., 169, 187
- Jansen, A., 371
 Jansson, P. O., 86
 Jarasch, E. -D., 254
 Javanaud, C., 325, 327
 Jenness, R., 231, 232, 235, 246, 254, 255
 Jensen, R. G., 223, 255
 Jimenez-Flores, R., 7, 42
 Jobe, D. J., 346, 347, 370
 Johnson, D. L., 298, 301, 302, 304, 322, 326
 Johnson, I., 344, 370
 Johnson, J. K., 43
 Jolles, P., 254
 Jones, M., 218
 Jones, M. N., 86
 Jones, R. C. D., 326
 Jones, V. A., 44
 Jongen, H. A. H., 303, 304, 306, 326
- Kabal'nov, A. S., 19, 42, 48, 87
 Kako, M., 69, 87
 Kamata, Y., 169, 187, 219, 220
 Kaminogawa, S., 220
 Kamiya, T., 188
 Kann, K. B., 111, 121
 Kanno, C., 224, 254
 Karel, M., 364, 370
 Kashchiev, D., 86
 Kato, A., 7, 42, 167, 169, 170, 171, 176, 184, 187, 188, 200, 219
 Kato, H., 217, 218
 Kato, T., 207, 219, 220
 Kaufman, V. R., 19, 42
 Kauzmann, W., 179, 187
 Keenan, T. W., 223, 224, 254, 255
 Kella, N. K. D., 184, 187
 Kerker, M., 15, 42
 Kessler, H. G., 247, 249, 250, 254
 Kester, J. J., 169, 172, 173, 188, 224, 254
 Keurentjes, J. T. F., 160
 Kieckbusch, T. G., 362, 370
 Kieser, F. G., 247, 254
 Kilpatrick, P. K., 161
 Kim, M. W., 139, 161
 Kim, S. -K., 30, 43

- Kim, S. H., 164, 165, 167, 173, 175,
176, 184, 185, 187
King, C. J., 362, 370
King, J., 42
Kinsella, J. E., 7, 14, 15, 16, 43, 163,
164, 165, 166, 167, 168, 170, 171,
172, 173, 174, 175, 176, 177, 178,
179, 181, 184, 185, 186, 187, 188,
190, 204, 214, 215, 218, 219
Kinsler, L. E., 303, 326
Kirby, S. J., 255
Kirikou, M., 208, 219
Kislalioglu, S., 67, 87
Kita, Y., 88, 370
Kitchen, B. J., 223, 254
Kitchener, J. A., 71, 87
Kito, M., 175, 187, 192, 218
Kjellander, R., 85
Klare, H., 89
Klein, J., 72, 73, 74, 87, 140,
161
Klein, R. A., 154, 161
Knight, J. T., 48, 87
Kobayashi, K., 42, 187
Koehler, R., 218
Kohda, M., 353, 370
Kojima, I., 340, 370
Komatsu, K., 187
Kometani, T., 219
Kondo, S., 69, 87
Koningsveld, R., 37, 42
Konning, G. H., 369
Koops, J., 232, 254
Korenman, Y. I., 340, 370
Korstvedt, H., 5, 42
Kostenbauder, H. B., 331, 370
Koury, B., 220
Krause, S., 40, 42
Kress-Rogers, E., 286, 326
Krishnan, M., 326
Krisko, B. A., 327
Krog, N., 27, 42, 63, 64, 66, 67, 68, 69,
84, 87, 239, 248, 254
Kruyt, H. R., 47, 49, 61, 87
Kubota, T., 339, 370
Kuehler, C. A., 191, 219
Kuntz, I. D., Jr, 179, 187
Kussakov, B., 77, 85
Kuster, G. T., 296, 297, 298, 304, 319,
321, 326
Kusuhara, K., 220
Kuwasima, M., 220
Kwei, T. K., 29, 42
Kylewski, P., 254
Lamb, H., 309, 326
Lamb, J., 325
Lamm, O., 52, 84
Lapina, G. P., 161
Larsson, K., 87
Lauridsen, J. B., 64, 66, 67, 87
Law, T. K., 43
Laws, D. R. J., 7, 41
Lazaridis, H. N., 191, 219
Lea, C. H., 362, 370
Leal, L. G., 77, 87
Lee, C. -H., 30, 43
Lee, H. S., 190, 192, 219
Lee, S. H., 77, 89
Lefebvre, J., 41
Leffler, E. B., 369
Le Neveu, D. M., 62, 87
Leo, A., 60, 87, 331, 337, 341, 370
Levich, V. G., 356, 370
Levine, S., 72, 87
Lewis, Y. S., 43
Lianos, P., 344, 370
Li-Chan, E., 7, 43
Liem, A. J. S., 77, 88
Lightfoot, E. N., 121
Lin, C. Y., 77, 88
Lindman, B., 371
Lindsay, D. A., 369
Lindsay, R. B., 293, 294, 303, 326
Ling, I. C., 369
Lipkina, E. N., 77, 84
Lis, L. J., 58, 88
Liu, T. Y., 188
Llevenas, E., 63, 88
Locke, S. J., 369
Long, R. E., 155, 162
Lorient, D., 218
Loucheux-Lefebvre, M. -H., 222, 254
Lucassen, J., 83, 88, 90, 104, 117, 121,
122

- Luckham, P. F., 44, 72, 73, 87
 Lusas, E. W., 218
 Luzzati, V., 66, 88
 Lyklema, J., 72, 88, 162
 Lyle, I. G., 62, 86
 Lynch, M. J., 11, 43
 Lynnworth, L. C., 307, 326
 Lyons, R. E., 341, 369
 Lyster, R. L., 229, 254
- Maaser, H., 321, 326
 McAlister, M., 88
 McBain, J. W., 52, 88
 McClements, D. J., 286, 287, 297,
 312, 319, 320, 322, 326
 McDaniel, R. V., 371
 McFeeters, R. F., 191, 220
 McGuiggan, P. M., 88
 Machida, Y., 84
 McIntire, G. L., 358, 370
 McIntosh, T. J., 371
 MacKay, G. D. M., 81, 88
 McKenzie, H. A., 165, 188
 Mackie, A. R., 42, 86, 326
 Mackor, E. L., 72, 88
 MacNeil, J. M., 369
 McNulty, P. B., 364, 370
 McOcker, D. E., 90
 McPherson, A. V., 223, 254
 MacRitchie, F., 48, 70, 88, 123, 128,
 134, 135, 152, 153, 161, 162, 164,
 165, 173, 179, 183, 187
 McRoberts, T. S., 71, 85
 McSkimin, H. J., 313, 315, 317, 326
 McWeeny, D. J., 370
 Madden, J. K., 155, 160
 Mader, C. W., 311, 313, 325
 Maeda, S., 220
 Magdassi, S., 370
 Mahanty, J., 57, 88
 Mahoney, R. R., 219
 Malcolm, S. A., 369
 Malhotra, A. K., 76, 77, 79, 80, 88, 90
 Mallamace, F., 325
 Manev, E. D., 77, 79, 80, 82, 83, 84,
 87, 88, 89
 Mangino, M. E., 223, 254
- Marangoni, C., 78, 88
 Marra, J., 58, 62, 88
 Martin, J. B., 90
 Martinov, G. A., 85
 Mason, S. G., 48, 60, 75, 81, 85, 88, 89
 Mason, T., 286, 326
 Massey, R. C., 330, 365, 370
 Matheis, G., 177, 178, 187
 Matoba, T., 190, 219
 Matsubara, T., 342, 356, 357, 370, 371
 Matsudomi, N., 42, 169, 170, 187
 Matsumoto, M., 220
 Matsumoto, S., 69, 88, 352, 353, 370
 Matsuzawa, K., 326
 Mattarella, N. L., 175, 187
 Meier, D., 72, 88
 Melik, D. H., 3, 27, 43
 Mercier, J. -C., 192, 193, 219, 222, 254
 Meyer, E. W., 186
 Miles, C. A., 286, 319, 326
 Miller, R. J., 190, 218, 220
 Mills, O. E., 254
 Mingins, J., 63, 84, 88, 89, 90, 160
 Minnaert, M., 300, 326
 Misaki, M., 220
 Mitamura, K., 260, 283
 Mitchell, D. J., 85, 86, 87
 Mitchell, E. E., 83, 86
 Mitchell, J. R., 12, 43, 135, 141, 143,
 146, 160, 161, 164, 171, 188, 228,
 253, 254
 Monnier, V. M., 189, 219
 Monroe, R. J., 44
 Montgomery, M. W., 218
 Mori, H., 187
 Morikata, S., 220
 Morr, C. V., 170, 188
 Morris, E. R., 69, 88
 Morrissey, P. A., 190, 218
 Morrow, R. W., 118, 122
 Moseley, M. E., 371
 Mossey, A. R., 218
 Motoki, M., 219
 Mottram, D. S., 365, 370
 Muir, D. D., 266, 272, 274, 279, 281,
 283
 Mukerjee, P., 346, 369, 370
 Mul, P. M., 61, 87

- Mulder, H., 22, 43, 221, 225, 226, 230, 236, 241, 254, 274, 283, 285, 326
 Muller, H. R., 238, 247, 254
 Mulvihill, D. M., 218
 Murray, A., 41, 42, 84, 85, 160, 161
 Murray, B. S., 32, 33, 41, 42, 43, 84, 85, 143, 144, 145, 146, 148, 160, 161
 Murray, E. K., 150, 151, 161, 229, 255
 Mussellwhite, P. R., 11, 43, 71, 87, 147, 160, 161, 253
 Myers, R. P., 255
 Mysels, K. J., 77, 86, 110, 121

 Nagai, T., 162
 Nagashima, N., 214, 219
 Nagle, J. F., 68, 88
 Nakai, S., 7, 42, 43, 167, 168, 169, 170, 171, 176, 184, 187, 188, 200, 219
 Nakamura, M., 31, 32, 43, 155, 156, 162
 Nakayama, T., 208, 219
 Nakayama, Y., 43
 Napper, D. H., 26, 28, 43, 70, 72, 86, 87, 88
 Narasinga Rao, M. S., 190, 219
 Narhan, S. K., 6, 24, 34, 41, 43
 Nash, N. H., 45, 88
 Natarajan, C. P., 43
 Nauwelaerts, F., 341, 370
 Needs, E. C., 249, 253, 255
 Netzel, J., 53, 82, 89
 Nicolau, C., 89
 Nieuwenhuysse, J. A., 122
 Niki, R., 255
 Ninham, B. W., 57, 62, 66, 85, 86, 87, 88, 90
 Nio, N., 191, 219
 Norde, W., 126, 127, 128, 162
 Nossal, R. J., 86
 Nowicka, G., 162

 Obata, S., 43, 162
 O'Brien, R. W., 75, 87
 Ochiai, K., 187, 191, 219
 Ogino, K., 63, 88
 Ogushwitz, P. R., 307, 326

 Okun, J. D., 366, 367, 368, 370, 371
 Olivecrona, T., 224, 255
 Olofsson, G., 344, 370
 Olsen, H. S., 191, 217, 219
 Omotosho, J. A., 24, 43
 O'Neill, T. E., 186
 Onishi, M., 63, 88
 Ono, H., 220
 Oortwijn, H., 13, 23, 33, 43, 44, 48, 88, 131, 132, 162
 Orr, C., 17, 43
 Ory, R. L., 189, 219
 Osako, Y., 42, 187
 Ottewill, R. H., 41, 84
 Overbeek, J. Th. G., 61, 82, 86, 90
 Owens, N. F., 128, 161
 Ozawa, K., 249, 255

 Pael-Joel, D., 90
 Pailthorpe, B. A., 85
 Palmer, G. J., 43, 254
 Pande, A., 324, 326
 Papadakis, E. P., 286, 287, 309, 313, 317, 326
 Parker, N. S., 42, 51, 83, 86, 87
 Parker, T. G., 260, 261, 262, 264, 267, 283
 Parks, K. K., 190, 218
 Parsegian, V. A., 62, 66, 86, 87, 88
 Pashley, R. M., 59, 62, 87, 88
 Patel, P. D., 14, 43
 Patterson, R. L. S., 365, 370
 Patton, S., 223, 255
 Payne, R. E., 191, 219
 Payne, S. J., 255
 Pearce, K. N., 7, 14, 15, 16, 43, 168, 171, 172, 188, 204, 214, 215, 219
 Peers, K. E., 325
 Peiffer, D. G., 161
 Penner, M. H., 187
 Perez, E., 72, 88
 Perkins, J., 360, 367, 369
 Perram, C. M., 68, 89
 Perram, J. W., 89
 Pertzov, A. V., 42, 87
 Pethica, B. A., 45, 52, 53, 54, 84, 88, 89, 90

- Pethrick, R. A., 302, 303, 318, 326
 Petrak, K. L., 29, 43
 Petrowski, G. E., 50, 55, 89
 Petty, J. H. P., 218
 Phillips, G. O., 11, 162
 Phillips, M. C., 52, 53, 54, 70, 86, 89,
 127, 129, 130, 131, 136, 137, 138,
 140, 141, 142, 144, 145, 146, 160,
 161, 164, 165, 167, 168, 169, 170,
 171, 173, 186, 188, 228, 229, 253,
 254, 255
 Phipps, L. W., 5, 43, 247, 250, 255,
 274, 283
 Pierce, A. D., 290, 295, 313, 326
 Pierce, G. W., 313, 326
 Pincus, P., 72, 87, 140, 161
 Pintaro, N. D., 190, 219
 Piotrowska, A., 320, 327
 Pisano, F. D., 331, 370
 Plantz, P. E., 223, 255
 Platikanov, D., 76, 89
 Plona, T. J., 298, 301, 302, 304, 322,
 326
 Pogson, E., 161
 Pomeranz, Y., 190, 219
 Poole, S., 152, 162
 Povey, M. J. W., 23, 43, 286, 287, 297,
 304, 311, 312, 319, 320, 321, 322,
 323, 326, 327
 Powrie, W. D., 41
 Pratt, K. C., 360, 370, 371
 Prigogine, I., 85
 Princen, H. M., 60, 89, 107, 121
 Prins, A., 94, 99, 102, 108, 117, 118,
 122, 230, 255
 Prokhorov, A. V., 59, 85
 Prokhorova, G. B., 370
 Proust, J. E., 72, 88
 Prud'homme, R. K., 155, 162
 Pryor, A. W., 314, 327
 Purdy, P. W., 42, 326
 Pusineri, C., 160
 Puskar, A., 290, 327
 Puski, G., 191, 219
 Radke, C., 84
 Radoev, B. P., 77, 81, 83, 84, 87, 89
 Rahalkar, R. R., 303, 304, 325, 327
 Rahma, E. H., 190, 219
 Rahman, A., 33, 43, 248, 255
 Ralston, J., 87
 Ranauto, H. J., 43
 Rand, R. P., 62, 87, 88
 Rao, M. A., 208, 219
 Rao, M. R., 302, 327
 Rapaille, A., 249, 254
 Ray, A. K., 19, 43
 Rayleigh, 3rd Baron (J. W. Strutt),
 306, 327
 Redwood, W. R., 85
 Reed, R. D. C., 327
 Regan, L. H., 133, 135, 162
 Regenstein, C. E., 190, 219
 Regenstein, J. M., 190, 191, 219
 Reinsborough, V. C., 370
 Rekker, R. F., 339, 371
 Remon, G. F., 55, 86
 Reniers, D. J., 188
 Requena, J., 60, 86, 89
 Reyes, E. S., 173, 188
 Reynolds, P. J., 254
 Rhea, K. C., 218
 Rhinesmith, R., 326
 Ribadeau-Dumas, B., 191, 219, 254
 Richardson, E. G., 325, 327
 Richardson, T., 7, 42, 163, 169, 172,
 173, 175, 176, 177, 178, 187, 188,
 218
 Richmond, P., 42, 86, 326, 327
 Ridout, E. A., 255
 Riisom, T. H., 87
 Rivas, H. J., 31, 43
 Roberts, I. W. L., 13, 43
 Roberts, R. T., 121, 158, 162
 Robertson, R. N., 253
 Robins, M. M., 42, 86, 326
 Robinson, J. B., 77, 86
 Robinson, K., 87
 Robson, E. W., 12, 13, 20, 41, 43, 161
 Rodriguez, V. B., 371
 Roeberson, G. J., 87
 Rokhlenko, A. A., 319, 327
 Rosen, M. J., 53, 54, 89
 Quirk, J. P., 62, 88

- Rosenau, J. R., 219
 Rosenberg, E., 158, 162
 Ross, S., 6, 43, 53, 89
 Rothwell, J., 249, 255
 Rowlinson, J. S., 38, 43
 Rubinovitz, C., 162
 Rubio, F. C., 337, 371
 Russel, W. B., 47, 81, 89
 Rydhag, L., 67, 69, 89
- Sabet, V. M., 69, 89, 90
 Said, W., 69, 89, 90
 St Angelo, A. J., 189, 219
 Saito, M., 43, 188
 Sajas, J. F., 285, 327
 Samak, Q. M., 126, 160
 Samal, K., 320, 327
 Sanders, J. V., 326
 Sanderson, M. L., 307, 327
 Saraf, B., 320, 327
 Sasaki, R., 219
 Sase, H., 211, 219, 220
 Sato, Y., 208, 219
 Sawada, K., 220
 Sayers, C. M., 286, 307, 322, 323, 327
 Sazdanova, S. V., 88
 Scaiano, J. C., 369
 Scanlon, M., 304, 321, 327
 Scheludko, A., 81, 82, 87, 88, 89
 Scheutjens, J. M. H. M., 41, 72, 86, 89, 160
 Schmid, E., 254
 Schmidt, D. G., 238, 239, 255
 Schmitt, A., 160
 Schulman, J. H., 23, 43
 Scott, R. L., 30, 38, 39, 40, 42, 43, 335, 370
 Scurlock, P. G., 239, 243, 244, 245, 255
 Seki, H., 316, 327
 Sen, L. C., 219
 Shankaracharya, N. B., 19, 43
 Shankaranarayana, M. L., 43
 Sharp, P. F., 227, 255
 Sharshakova, L. N., 370
 Shchukin, E. D., 42, 87
- Sherman, P., 24, 31, 33, 42, 43, 84, 88, 154, 160, 161, 208, 219, 248, 253, 254, 255
 Shetty, K. J., 172, 178, 187, 188, 190, 219
 Shibasaki, K., 219, 220
 Shimada, A., 200, 201, 202, 204, 206, 207, 209, 210, 219, 220
 Shimizu, M., 7, 43, 168, 169, 171, 188, 191, 220
 Shinoda, K., 121
 Shirikova, T. Y., 162
 Shotten, E., 155, 162
 Shung, K. K., 322, 327
 Siciliano, A., 42
 Silberberg, A., 138, 162
 Simon, S. A., 346, 371
 Singer, S. J., 218
 Siu, M., 188, 190, 220
 Sivik, B., 254
 Skjoldebrand, C., 254
 Slattery, J. C., 77, 85, 88
 Sloan, F. E., 160
 Slutsky, L. J., 293, 294, 303, 323, 327
 Small, D. M., 68, 89
 Smith, A., 48, 85
 Smith, D. M., 191, 220
 Smith, G. A., 369
 Smith, L. J., 160
 Smith, R. A. D., 230, 254
 Smith, R. L., 286, 322, 323, 327
 Smitham, J. B., 84
 Snowden, M. J., 158, 162
 Soderquist, M. E., 127, 162
 Solan, A., 86
 Solans, C., 24, 42
 Sonntag, H., 53, 72, 79, 82, 89
 Sorokin, M. M., 161
 Spinelli, J., 191, 220
 Srivastava, S. N., 56, 71, 89
 Stainsby, G., 1, 3, 17, 26, 41, 42, 46, 84, 85, 123, 135, 138, 139, 142, 143, 155, 160, 161, 162, 230, 234, 243, 254, 255, 268, 271, 282, 283, 285, 325
 Stanley, K. K., 153, 161
 Stenius, P., 85
 Stevens, W. F., Jr, 86

- Stewart, W. E., 121
 Stilbs, P., 343, 347, 358, 359, 360, 371
 Stine, C. M., 191, 219
 Stoylov, S. P., 77, 89
 Streng, K., 89
 Streuper, A., 247, 249, 250, 251, 255
 Sturm, J. C. F., 287, 325
 Su, J. C., 188
 Sugimoto, M., 187
 Sullivan, R. J., 43
 Sung, H. Y., 177, 178, 188
 Sutherland, I. A., 355, 371
 Suzuki, E., 214, 219
 Suzuki, J., 217
 Swaisgood, H. E., 222, 255
 Swoboda, P. A. T., 362, 370
 Symons, P. C., 85
- Tadros, Th. F., 3, 41, 44, 45, 47, 49,
 51, 59, 60, 71, 89
 Taha, A. A., 369
 Tahara, S., 61, 84
 Tajima, K., 67, 86, 89
 Takahashi, T., 220
 Takeuchi, I., 219
 Takinami, K., 219
 Tamaki, E., 218
 Tamboer, M., 41
 Tanaka, M., 338, 370
 Tandon, R. K., 87
 Tanford, C., 131, 162
 Tanimoto, S., 217, 220
 Taylor, A. R., 85
 Taylor, F. H., 52, 86
 Taylor, G., 360, 371
 Taylor, J. A. G., 54, 63, 84, 88, 89, 90
 Taylor, S. A., 370
 Templar, S. R., 371
 Ter-Minassian-Saraga, L., 52, 89,
 179, 188
 Texter, J., 342, 356, 357, 370, 371
 Thampy, R. Y., 326
 Thijssen, J. M., 326
 Thome, K. E., 248, 255
 Thomlinson, M. M., 87
 Thompson, L. U., 173, 188, 190, 220
 Thunck, F., 323, 325
- Tiddy, G., 62
 Tirell, M., 87
 Toda, J., 220
 Toiguchi, S., 194, 195, 196, 217, 220
 Toksöz, M. N., 296, 297, 298, 304,
 319, 321, 326
 Tolstoguzov, V. B., 29, 37, 44
 Tompa, H., 39, 44
 Tordai, L., 129, 130, 134, 162
 Tornberg, E., 4, 34, 44, 133, 135, 162,
 166, 179, 188
 Townsend, A. A., 169, 171, 184, 188
 Toyokawa, H., 220
 Trapeznikov, A. A., 133, 162
 Traykov, T. T., 78, 80, 87, 89
 Trebbi, G. F., 85
 Treiner, C., 347, 371
 Trifiletti, S. E., 84
 Truell, R., 327
 Tsuji, R. F., 217, 220
 Tsutsui, N., 187
 Tucker, E., 369
 Tung, L. H., 37, 44
 Tung, M. A., 188, 190, 218
- Uberall, H., 300, 301, 304, 306, 323,
 325
 Ueda, Y., 88, 370
 Unger, S. H., 354, 371
 Uniyal, S., 160
 Unterberger, B., 89
 Urick, R. J., 296, 297, 298, 320, 321,
 327
- Vadehra, D. V., 218
 Vanaman, T. C., 253
 van Bakel, P., 371
 van Boekel, M. A. J. S., 33, 44, 48, 89,
 224, 225, 236, 248, 255
 van den Aarssen, M., 326
 van den Tempel, M., 88, 90, 108, 117,
 121, 122
 van der Waals, J. H., 72, 88
 van de Ven, T. G. M., 48, 89
 van Hooydonk, A. C. M., 238, 239,
 247, 249, 250, 251, 255

- van't Riet, K., 102, 110, 122
 van Vliet, T., 72, 88, 106, 109, 122
 van Voorst Vader, F., 53, 90, 122
 Verhoef, W. A., 326
 Verwey, E. J. W., 61, 90
 Vincent, B., 3, 28, 44, 45, 47, 49, 51,
 53, 59, 60, 71, 84, 85, 86, 89, 136,
 162
 Vins, V. G., 162
 Vlugter, J. C., 302, 325
 Voinov, O. V., 77, 90
 Vold, M. J., 35, 44, 71, 90, 337, 371
 von Smoluchowski, M., 47, 90
 Voutsinas, L. P., 169, 170, 188
 Vrij, A., 82, 83, 85, 86, 88, 90, 114, 122
- Wada, T., 220
 Wainwright, T., 121
 Waite, F. A., 44
 Wake, R. G., 154, 161
 Wakeham, W. A., 360, 370, 371
 Walker, D. A., 11, 43
 Walker, H. W., 118, 122
 Walker, J., 68, 90
 Walstra, P., 3, 5, 6, 13, 15, 22, 23, 30,
 33, 43, 44, 45, 48, 71, 76, 88, 89, 90,
 131, 132, 162, 221, 224, 225, 226,
 230, 231, 235, 236, 241, 246, 248,
 254, 255, 274, 283, 285, 326
 Walton, A. G., 127, 162
 Wanderlingh, F., 325
 Wang, T. T., 29, 42
 Waniska, R. D., 164, 165, 166, 167,
 172, 173, 174, 179, 181, 188
 Ward, A. F. H., 53, 90, 129, 130, 134,
 162
 Ward, A. J. I., 133, 135, 162
 Warthesen, J. J., 190, 217
 Wasan, D. T., 76, 77, 79, 80, 88, 90
 Watanabe, M., 192, 194, 195, 196,
 197, 199, 200, 204, 207, 213, 214,
 217, 219, 220
 Waterbeemd, H. van de, 350, 351, 371
 Webb, N. B., 14, 44
 Wedlock, D. J., 11
 Wedzicha, B. L., 332, 371
 Wells, P. N. T., 286, 327
- West, S. I., 162
 Whateley, T. L., 43
 Whitaker, J. R., 187, 190, 219, 220
 White, G. W., 251, 253
 White, J. C. D., 260, 261, 283
 White, L. R., 87
 White, P. J., 370
 Whitehill, D., 370
 Whitney, R. McL., 254
 Whittington, S. G., 136, 162
 Whyman, R. H., 42, 160
 Wibberley, K., 155, 162
 Wieland, T., 218
 Wiersema, P. H., 87
 Williams, P. A., 11, 162
 Williamson, R. C., 313, 327
 Wilson, A. G., 283
 Wilson, D. R., 160
 Wilson, W. D., 310, 327
 Wilton, I., 69, 89
 Winter, S., 254
 Wohltjen, H., 286, 327
 Woo, S. L., 177, 178, 188
 Wood, D. F., 43
 Woodford, T. A., 254
 Wooding, F. B. P., 223, 255
 Woods, D. R., 77, 84, 87, 88
 Woods, O. R., 330, 370
 Wooton, J. W., 63, 90
 Wright, T., 318, 327
- Yamamoto, I., 202, 205, 206, 207, 208,
 220
 Yamaoka, H., 187
 Yamasaki, R. B., 218
 Yamashita, M., 192, 193, 217, 218,
 220
 Yamauchi, F., 187, 190, 220
 Yamauchi, K., 43, 188, 220, 224, 254
 Yamazaki, Y., 220
 Yampol'skaya, G. P., 161
 Yang, H. S., 366, 371
 Yasumatsu, K., 191, 220
 Yazawa, E., 207, 219, 220
 Yeadon, D. A., 67, 90
 Yeager, E. B., 325
 Yonezawa, D., 88, 370

- Yoshikura, M., 43, 162
Yue, B. Y. T., 63, 88, 90
Yuryev, V. P., 14, 44
- Zadow, J. G., 247, 254
Zakaria, F., 191, 220
Zana, R., 344, 370
Zapryanov, Z., 76, 77, 79, 80, 90
- Zayas, Yu F., 327
Zemb, T. N., 65, 90
Zimmels, Y., 22, 44
Zimontkowski, S., 89
Zingsheim, H. P., 86
Zittle, C. A., 193, 220
Zosim, Z., 158, 162
Zourab, Sh. M., 69, 89, 90
Zuckerberg, A., 162

Subject Index

- Acacia gum. *See* Gum arabic
- Acetylation of proteins, effect on surface proteins, 174, 190
- Acid-base properties of dispersed solutes, 339-40
- Acoustic impedance, 295, 318, 319
- Activity (coefficient), 52, 134, 334, 335, 340, 344-5, 361, 362
- Acylation of proteins, effect on surface properties, 172-5, 190
- Adsorbed films. *See* Protein films
- Adsorption isotherm
- general form, 51
 - Gibbs, 52
 - protein, 126-7
- Aerated systems, ultrasonics of, 322-3
- Aerosol dairy cream, 239, 240, 243
- Aerosol non-dairy topping, 240, 244
- Agar, 40
- Aggregation, statistics of, 47-9
- Ahuja equation, 300
- Air-water interface, solid particles at, 114, 116
- Albumin. *See* Bovine serum albumin
- Alcohol
- effect on milk protein stability, 260-9
 - partition into micelles, 344-5
- Alcohol-containing emulsions, 26, 257-83
- Alginate, 249
- Aliphatic aldehydes, partition coefficients, 362-4
- n*-Alkyl betaines, 69
- Ament equation, 297, 298, 299, 301, 319
- Amino-acid side-groups, chemical modification of, 172
- Amphiphiles. *See* Low-molecular-weight surfactants
- Amphiphilic character of proteins, 191-2
- Amphitol-20BS, 201, 203
- Antifreeze emulsion, 211-17
- Antimicrobial additives, 330, 331, 339
- Antioxidants, 330, 331, 332, 367
- Ascorbic acid, 365
- Association colloids, 20
- Atholl Brose, 257
- Attenuation coefficient, 289, 292
- Attenuation measurements, 290, 317-18
- Baileys Irish Cream Liqueur, 257
- Bancroft's rule, 78, 119, 121
- Beer, 19
- foam, 91, 93, 94, 97, 103, 104, 105, 111, 158

- Benzene partition into micelles, 346-7
- Benzoic acid, 330, 331, 339, 341
- Bernoulli's Law, 98
- Biliquid foam, 35
- Bovine serum albumin (BSA), 56, 71, 124, 127, 128, 138, 142, 145, 164, 165, 168, 169, 170, 172, 173, 174, 201, 202, 203, 205, 206
- Boyle's Law, applied to bubbles, 98
- Breadbaking, 93, 211, 301
- Bridging flocculation, 11, 26, 72, 247
- Brij-35, 55
- Brominated vegetable oil, 19, 20
- Bromoform, 298-9
- Brownian motion, effect on aggregation, 47, 74-5
creaming, 20
drainage between droplets, 75
ultrasonic scattering, 309
- Bubble ghosts, 226-8
- Bubble radius, change with time, 102-4
- Bubbles formed from orifice, 96
- Bubbles formed by cavitation, 290
- Buffer rod, 313, 314-15
- Butter, 2, 30, 221, 252
- Cake batter, 2
- Calcium ions, destabilization by, 27, 232, 260, 262-5, 276-7
- Calcium sequestrant, 261, 265, 276-8, 282
- Carbon dioxide bubbles, 93, 102
- Carbonized beverages, 93, 97
see also Soft drinks
- Carboxylic acids, partitioning of, 336-41
- Carotenoids, 343-4
- Carrageenan, 242, 243, 249
- Casein
micelles, 6, 132, 222, 225, 226, 227, 228, 229, 230, 247, 260
see also Caseinate
- α_{s1} -Casein, 7, 12, 13, 27, 143, 145, 175, 191, 193-6, 222, 223
- α_{s2} -Casein, 143, 145, 222
- β -Casein, 7, 12, 13, 27, 31, 32, 124, 126, 127, 130, 131, 134, 135-7, 141-3, 145, 151, 169, 191, 192, 222, 223, 228, 229, 231, 232
- κ -Casein, 32, 143, 144, 145, 151, 154, 168, 169, 171, 192, 222, 229
- Casein(ate) + gelatin, 9-11, 147-51
- Caseinate, 6, 7, 9, 10, 12, 13, 28, 33, 118, 136, 142, 143, 145, 152, 154, 178, 198, 201, 202, 203, 205, 206, 212, 214, 215, 242, 246, 248, 249, 259, 263, 265-6, 268-9, 270, 271-2
- Catalase, 152
- Cavitation, 290
- Cellular suspensions, ultrasonics of, 322
- Cellulose derivatives, 155, 242, 249, 365
- Centrifugation of emulsions, 8, 9, 10, 20, 23, 35
- Chemical modification of proteins, 7, 171-85, 190, 192
- Chocolate, 301, 307, 322, 323
- Choco-mousse, 91, 93
- Churning, 225, 241
- Citraconylation of proteins, 190
- Citrate, 260, 264-5, 271, 282
- Clumping of fat globules, 28, 30, 232-41, 245, 249, 250, 274
- Coagulation of adsorbed protein, 48, 70, 74, 128
- Coagulation of droplets, definition of, 45
- Coalescence, 18, 30-5, 45, 48, 49, 68, 70, 71, 74, 75, 80-3, 145, 183, 212-15, 224, 234, 236, 250, 251
- Coconut oil, 156, 211
- Coexistence curve, 140
- Coffee creamers, 61
- Coffee oil, 361
- Cohesive cream, 18, 23
- Collagen, 73, 74, 138
- Colloidal dispersions, ultrasonics of, 301, 321-2
- Competitive adsorption, 6-13, 35, 48, 142, 147-55, 159, 228
- Conformational change in protein films, 126-8, 136-7

- Contact angle, 60, 114, 224-5
Continuous wave interferometry, 315
Corn oil, 154, 365
Cottonseed oil, 341
Coulter counter, 3, 10, 16, 27, 207, 273
Counter-current chromatography, 354-6
Cream liqueurs, 2, 6, 257-83
 citrate addition, effect of, 264-5, 277-9
 commercial development, 258-60
 composition, 270
 definition of, 260
 factors affecting stability, 259, 272-9
 fat plugs, 18, 272-5, 279
 gelation, 259, 267, 272, 275, 278, 279, 280-1
 high alcohol content, 279-83
 ionic strength effects, 267, 269, 281-2
 pH on shelf-life, effect of, 276
 preparation of, 269-72
 shelf-life, 258-9, 263, 272, 275-8, 279, 280, 282
 size of fat particles in, 273-5, 279
Creamed layer, 18, 20, 23, 35
Creaming, 8, 18, 20-4, 92, 101-2, 106, 108, 212-15, 268, 279
 milk, of, 20, 22
 ultrasonic monitoring of, 23, 32, 320
Critical point, 38, 139
Critical micelle concentration (CMC), 80, 201, 202, 337, 343, 344, 368
Critical thickness of film rupture, 31, 48, 80-3, 119
Crystallizing systems, ultrasonics of, 319

Dairy foams, 221-55
Demulsification, control of, 11
Denaturation by heat, 7, 138, 169-71, 173
Depletion flocculation, 28-9, 70, 74
Depletion stabilization, 28, 70, 74

Derjaguin-Landau-Verwey-Overbeek (DLVO) theory, 56, 61
Dextran, 28, 29, 30, 41
 sulphate, 41
Dibutylamine (DBA), 365
Dielectric constant, 26
Diffusion coefficient
 protein, 124, 129, 131, 134
 small-molecule solute, 19, 79, 82, 94, 347, 348, 350, 356-60
Diglycerides, 2, 11, 50, 230, 248
Dihexylamine (DHA), 365
Dilution of emulsions, 15-16
Dimyristoyl phosphatidylcholine, 154
Disjoining pressure, 60, 82
Dispersed systems
 distribution of additives in, 329-71
 sound absorption in, 304-7, 321, 322
Dispersion phenomenon in ultrasonics, 292, 316-7
Displacers, 13, 27, 33, 48, 126, 127
Disproportionation, 20, 102-4, 120
Disulphide bonds, 8, 141, 143, 144, 171, 184, 223, 229
 reduction of, 154, 184-5
Disulphite ion, 332
Doppler shift in ultrasonics, 308-9
Double-layer interaction, 46, 49, 60, 61, 68, 71, 73-4, 83, 112
Drainage
 between approaching emulsion droplets, 46, 74-80
 foam, 108-12
Droplet deformation, 23, 59-60, 75, 76-7, 230, 349
Droplet disruption, 5, 10
Droplet-size distribution, 3, 13, 15, 16, 18, 19, 20, 23, 27, 209, 230, 274-5
Dynamic surface properties, 93, 98, 142

Egg protein, modification of, 191
Egg white, 92, 178
Egg yolk, 34
Elastic modulus of foam, 107

- Electron microscopy, 17, 33, 242
Electrostatic stabilization, 25-6
 see also Double-layer interaction
Ellipsometry, 124, 130, 131
Emulsan, 158
Emulsification. *See* Homogenization
Emulsifier
 testing efficiency of, 14-18
 use of the term, 2
Emulsifying activity (index) (EAI), 7,
 8, 14, 168, 169, 173, 174, 178,
 181, 196-8, 204, 209
Emulsifying capacity, 14, 158
Emulsion formation, equipment for,
 4-6
Emulsion instability, types of, 18
Energy barrier to aggregation, 47-8
Enzymatically modified casein, 193-6
Enzymatically modified gelatin
 (EMG), 196-216
Enzymic activity, 3, 4, 9, 34, 158, 190,
 191, 192-3, 222, 223, 257
Essential oils, 121, 330, 331
Esterification of proteins, effect on
 surface properties, 175-7
Ethanol stability of milk, 260-4
Ethanolamine, 67
Evaporation, foam breaking by, 119

Fast flocculation, 45, 47
Fast protein liquid chromatography,
 8, 12
Fat crystals, 2, 33-4, 224-5, 244-5, 248
Fat crystallization, 33-4, 224-5, 234,
 244-5, 250-1, 319
Fat globules (FG), 233, 240, 242-7,
 251
Fat globule membrane (FGM), 223,
 234, 235, 238, 247
 see also Milk fat-globule
 membrane
Fatty acid, free, 50, 134, 223, 230, 249
Fatty acid ester, 50, 51, 242
Fibrinogen, 127
Film drainage, 31, 46, 75-7, 79-80,
 108-12, 117
Film stability, 80-3, 112-15

Film thickness, 20, 31, 117
 fluctuations, 46, 81, 114, 115
Fish protein, 197-8, 211
Flavouring, 2, 26, 258, 330, 331, 364
Flocculation, 10, 11, 16, 18, 21-3,
 24-30, 45, 47, 70, 72, 269, 321
Flory-Huggins parameter, 38
Flour, 211
Fluctuation forces, 62
Fluid velocity, ultrasonic
 determination of, 308
Foam breaking, principles of, 115-21
Foam collapse in milk, 230-1
Foam formation, methods of, 92-101
Foam rigidity, 106-8
Foam stability
 dilute foams, 101-6
 disulphide bonds on, effect of,
 184-5
 particles on, effect of, 115-19, 230
 polyhedral foams, 106-15
Foaming capacity of modified
 proteins, 169, 170-1
Food additives in dispersed systems,
 329-71
Food colours, 331, 332
Food emulsion, definition of, 1
Food preservatives, 330, 331
Food proteins, surface properties of,
 69-74, 123-62, 163-71
Free induction decay (FID)
 technique, 214, 216
Freezing of emulsions, 11, 23, 34,
 211-17, 251-2
Frequency dependence
 rheological parameters, 293-4
 ultrasonic parameters, 292-4
Fruit oil, 19

Gas transport from bubbles, 102-4,
 104-5
Gelatin, 6, 8, 9-13, 29, 40, 136, 138,
 143, 147-52, 155, 157, 194, 196,
 199, 200, 342, 357
 hydrolysate, 200, 201, 203, 205, 206
Gel-like layers, 10, 58, 68, 137-9, 144
Gel-like structure, 22-3, 25, 207, 208

- Gels, ultrasonics of, 302, 314
 Gibbs adsorption equation, 52, 202
 Gibbs film elasticity, 79, 108
 Gibbs free energy of mixing, 38, 39
 Gibbs–Marangoni effect, 78
 γ -Globulin, 152
 Gluten, 124
 Glycerol distearate, 154
 Glycerol esters, 64
 Glycerol lactyl palmitate (GLP), 63, 64
 Glycerol mono-oleate (GMO), 55, 56
 Glycerol monostearate (GMS), 13, 24, 154, 259
 Glycinin. *See* Soy glycinin
 Glycoproteins in milk, 223–4
 Glycosylation of proteins, effect on surface properties, 178–83
 Groundnut oil, 362
 Guar gum, 156
 Gum arabic, 31, 32, 40–1, 155–8, 314
 Gum tragacanth, 155, 156

 Hamaker constant, 56, 57, 82
 Henry's Law applied to gas solubility, 102
 Herschel–Bulkley equation, 208
 n -Hexadecane, 12, 149, 151–2, 157, 320
 Hexadecylpyridinium chloride, 345
 Hexadecyltrimethylammonium bromide, 346
 High-performance liquid chromatography (HPLC), 354
 HLB concept, 6, 65
 Homogenization, 4–6, 9, 10, 21, 23, 26, 131–2, 246–8, 250, 259, 262–3, 267, 268, 270–5, 280, 282
 Homogenized dairy cream, 246–8, 251, 274
 Homogenized milk, 20
 Honeycomb-like foam, deformation of, 91, 106–7, 119
 Hop oil, 7, 19
 Hydration interactions, 59, 62, 63, 66, 67
 Hydrocarbon–water interface, comparison with triglyceride–water interface, 49, 55
 Hydrocolloids, 21, 155, 240, 249
 Hydrogen sulphite ion, 332
 Hydrophobic chromatography, 7, 168
 Hydrophobic particles, foam breaking by, 115
 Hydrophobicity of proteins, 7, 30 *see also* Surface hydrophobicity...
 Hydroxybenzoic acid, 331, 340
 Hydroxyethylcellulose, 28
 Hydroxypropyl dextran, 41

 Ice-cream, 1, 11, 33, 91, 93, 221, 239, 250, 251–2, 331
 mix, 2, 13, 21
 Ice crystal formation, 34, 211–17, 251
 Image analysis, 16
 Imitation cream, 27, 239
 Impedance matching, 296, 318
 Induction period in protein adsorption, 133, 134
 Instant whipped cream, 93, 97, 239
 Insulin, 152
 Interdroplet forces, 24
 adsorbed protein on, effect of, 25–7, 71–4
 adsorbed surfactant monolayers on, effect of, 55–63
 adsorbed surfactant multilayers on, effect of, 67–9
 Interfacial pressure. *See* Surface pressure...
 Interfacial tension. *See* Surface tension
 Invariant emulsifying activity, 14
 Inversion. *See* Phase inversion
 Irreversibility of protein adsorption, 125–8, 141

 Johnson–Plona equation, 298, 301

 Kinetics of solute partitioning, 348–53
 Kuster–Toksöz equation, 296–8, 301, 319

- α -Lactalbumin, 143, 151, 152, 223, 228, 246
 Lactoferrin, 223
 β -Lactoglobulin (BLG), 7, 13, 144, 151, 152, 164-7, 170, 177, 178, 179-83, 223, 227, 229, 246
 Lactose, 259, 261
 Lag phase in protein adsorption, 133, 134
 Lamellar mesophase, 65-7
 Langmuir equation, 55
 Laplace pressure, 75, 81, 97, 102, 111, 113, 115
 Leaf protein, 191
 Lecithin, 51, 153, 242, 368
 see also Phosphatidylcholine
 Legumin, 35
 Leucine *n*-alkyl esters, protein modification with, 195-9
 Light scattering, 3, 14, 17, 82, 320
 Limiting adsorption, 53, 63
 Linoleic acid, in antifreeze emulsions, 212, 214, 215
 Lipolysis, 224, 230, 249, 257
 Liposomes, 64
 Liquid crystals, 23-4, 65-6, 67, 69, 154, 203-4, 206, 208
 Liquid-liquid immiscibility, 35-7, 40, 332-4
 Liquid supersaturated with gas, foam from, 97
 Low-molecular-weight amphiphiles. *See* Low-molecular-weight surfactants
 Low-molecular-weight food additives, 329-71
 Low-molecular-weight surfactants, 2, 5, 6, 9, 11, 13, 19, 23, 27, 31, 33, 63, 94, 99, 105, 112, 125, 127, 200, 248, 259, 260, 332
 Lysozyme, 32, 53, 54, 70, 73, 124, 127, 129, 130-5, 138, 140-2, 144-6, 169, 171, 178, 223

 Maillard reaction, 189
 Maleylation of proteins, 190

 Maltosyl- β -lactoglobulin (maltosyl-BLG), 179-83
 Marangoni flow, 31
 Margarine, 2, 322
 Marginal regeneration, 109-10
 Mass transport across interface, 19-20, 348-53, 357-8
 Mass transport to interface, comparison of diffusion and convection, 130-1
 Mayonnaise, 2, 18, 22, 34, 68, 211, 320
 Mayonnaise-like emulsion, 207-11
 Meat proteins, modification of, 191
 Medium chain triglyceride (MCT810), 53, 64, 73
 Methylation of proteins, 190
 Micelles, 16, 20, 50, 64, 65, 202
 solute partition into, 343-8, 358-60, 361, 367-8
 Microemulsions, ultrasonics of, 320
 Microfluidization, 4, 23
 Microscopy, optical, 3, 16, 207
 Milk, surface-active components in, 222-5
 Milk fat-globule membrane (MFGM), 3, 223-4, 235-8, 246
 Milk foam, 94, 103, 225-32
 Milk protein
 alcohol stability, 260-9
 modification, 191
 Mineral oil, 5, 362
 Mixed films, 24, 33, 35, 69, 125, 154, 229
 Mixed polymer solutions, 35-41
 Monoglycerides, 2, 11, 19, 50, 51, 63, 67, 225, 230, 243, 248
 Mousse, 221, 239, 240, 242, 250
 see also Choco-mousse
 Moving fluids, acoustic propagation in, 307-9
 Mucin, 73
 Multiple emulsions, 350, 352-3
 Myosin, 124, 146-7

 Navier-Stokes equation, 304
 Neatsfoot oil, 362
 Nitrite, 330, 332, 364-8

- Nitrogen bubbles, 102
N-Nitrosamines, 365
 Nitrous oxide, 93
 Nuclear magnetic resonance (NMR),
 177, 194, 214, 338, 346, 358-60
 Non-destructive testing (NDT), 286,
 290
 Nonylphenylglycoether, 79
- Octanol, partition into, 339, 341, 342,
 347, 350, 354, 361
- Odour threshold, 362
- Oils
 coconut, 156, 211
 coffee, 361
 corn, 154, 365
 cottonseed, 341
 essential, 121, 330, 331
 fruit, 19
 groundnut, 362
 hop, 7, 19
 mineral, 5, 362
 neatsfoot, 362
 olive, 1, 341, 352
 orange, 19
 paraffin, 71, 362
 peanut, 341, 361
 safflower, 362, 363, 364
 soya, 118, 191, 207, 211
 vegetable, 5, 10, 19, 20, 33, 303,
 320, 330, 341, 362
- Oil-water interface, nature of, 49-50
- Oleyl alcohol, 55
- Olive oil, 1, 341, 352
- Optical reflectance, 80, 83
- Orange oil, 19
- Ostwald ripening, 18-20, 28, 48
 see also Disproportionation
- Ovalbumin, 129, 131, 134, 135, 141,
 169, 170, 198
- Overrun, 99, 238, 245
- Ovomucin, 178
- Ovomuroid, 171
- Papain-catalysed reaction, protein
 modification by, 193-4, 196
- Para- κ -casein, 154
- Paraffin oil, 71, 362
- Partial coalescence, 23, 30, 33
- Partially miscible liquids, 35-7, 332
- Particle-size distribution,
 determination of, 16-18
- Partition chromatography, 354
- Partition coefficient
 air-solution, 330, 362-4
 aliphatic aldehydes, 362-4
 amphiphiles, 50
 concentration dependence, 334-5
 definition of, 332, 333
 emulsion systems, 341-2, 356
 micellar systems, 330, 343-8,
 358-60, 367
 semi-empirical correlations, 340-1
 solute interactions, effect of, 335,
 336-9
 two-phase systems, 353-8, 362-7
- Pea globulins, 35
- Peanut oil, 341, 361
- Pectin, 155
- Pentanoic acid, 337
- pH effects, 7, 26, 127-8, 157, 164-9,
 173-4, 176-7, 182-5, 204, 207,
 209, 210, 260-2, 272, 276, 332,
 339, 364-6
- Phase diagrams, 37, 50, 65, 139, 208,
 333
- Phase inversion, 14, 18, 30, 319
- Phase separation, 29, 40-1, 134,
 138-9, 155, 333-4
- Phosphate as sequestrant, 262
- Phosphatidylcholine, 62, 67, 69, 134,
 152, 154, 224
- Phosphatidylethanolamine, 62, 67,
 224
- Phosphatidylglycerol, 67
- Phosphatidylinositol, 62
- Phosphatidylserine, 67
- Phospholipase, 34
- Phospholipid bilayers, 58, 67
- Phosphorylation of proteins, effect
 on surface properties, 145,
 177-8, 190
- Photosedimentation, 17
- Pickering stabilization, 114

- Plait point, 37, 40
Plastein reaction, 192
Plateau borders, 60, 80, 106–9, 120, 229
 drainage, 110–12
Poisson–Boltzmann equation, 61
Polar solutes in micellar systems, 344–8
Polyacrylamide gel electrophoresis (PAGE), 194
Polyalanine, 152–3
Polydispersity, 3, 15, 17, 20, 27, 37, 47, 301
Poly(ethyl oxide), 72, 73, 74
Poly(ethylene glycol), 41
Polyglycerol stearate (PGS), 212, 214, 215, 216
Polyhedral foam, 91, 106–15, 120–1
Poly-L-lysine, 73, 74
Polymer adsorption, statistical aspects of, 126
Polymer phase separation. *See* Phase separation
Polymer–polymer incompatibility, 29, 35–41, 155
Polymeric stabilization. *See* Steric stabilization
Polymeric surfactants, adsorbed films of, 69–74
Polyoxyethylene sorbitan monooleate, 214
Poly(oxyethylene)ated surfactants, 55, 57, 62, 201, 202
Polysaccharides
 emulsion stability, effect on, 28–9, 69
 surface activity, 2, 69, 155–8
Polysorbates, 11, 63, 248
Polyvinylpyrrolidone, 138, 249
Power-law equation for surface viscosity, 103
Prewetting, 139–40
Primary minimum, 48, 59
Propionic acid, 331
Propylene glycol monostearate, 248
Protein adsorption, 70–1, 123–62
 competitive, 6–13, 147–55, 228
 Protein adsorption—*contd.*
 diffusion-controlled, 124, 128–31, 133, 182
 kinetics, 128–32
 multilayers, 8, 9, 138, 140, 149, 150
 reversibility, 8, 125–8, 141
 surface pressure *versus* time plots, 132–6, 165–6
 Protein analysis in emulsions, 8–9, 13
 Protein as emulsifier, molecular requirements for, 7
 Protein desorption, 19, 125, 126, 127–8, 152–3
 Protein films
 aging, 9, 143–5
 mixed, 147–55, 229
 structure, 24, 126, 128, 136–47
 surface pressure, 132–6
 surface rheology, 9, 10, 31–2, 34, 37, 70, 142–7, 148–54, 175, 176
 see also Protein adsorption
 Protein flexibility, 7, 8, 163, 168, 173, 184
 Protein hydrophobicity, 7, 154, 167–8, 222, 223
 Protein labelling, 8, 127
 Protein look-alikes, 155–8
 Protein modification, 7, 163–220
 Proteins in milk, 222–3
 Proteose peptone 3 (PP3), 224
 Proteose peptone 5 (PP3), 223
 Pulsating bubbles, foam formation from, 97, 98
 Pulse echo technique, 286, 287–9, 311–4, 320, 323
 Pulse interferometer, 314
Quantitative structure–activity relationship (QSAR), 331, 341
Rao formula, 302
Resonant scattering, 297, 300, 304, 307, 321
Reynolds equation of liquid flow, 77, 78, 80
Rheology of emulsions, 25, 207–10, 263–9, 281–2

- Safflower oil, 362, 363, 364
Salad cream (dressing), 1, 21, 22, 33, 320, 331
Saturation adsorption, 53
Sauce béarnaise, 68
Secondary minimum, 46, 62
Self-bodying, 23-4
Serum separation, 18, 23, 268, 276, 279
Shear-induced clumping, 236
Shear-induced coalescence, 34
Shear-induced flocculation, 27-8
Sing-around technique, 313, 314
Skim milk, 223, 231, 232, 260, 262
Slow flocculation, 46, 47
Small-molecule surfactants, 50-69
 see also Low-molecular-weight surfactants
Sodium bicarbonate in wine, 272
Sodium caseinate. *See* Caseinate
Sodium dodecyl sulphate (SDS), 16, 50, 53, 69, 79, 80, 83, 171, 194, 337, 344, 347, 367
Sodium stearoyl lactylate, 50, 60, 61, 63
Soft drinks, 18, 19, 20
Solid dispersions, ultrasonics of, 322
Solubility
 additives, 329-71
 emulsifier, 7, 121
 gas, 20, 91, 93, 102
 oil, 18, 48
Solubility parameter, 38
Solute-solute interactions, effect on partitioning, 336-9
Solute-solvent interactions, effect on partitioning, 336-9
Solvent quality, 26, 72
Sorbitan fatty acid esters, 50, 62, 63, 69
Sound absorption, theory of, 302-7
Sound propagation in water, 287, 289, 291, 309-11
Soy globulin, 170, 184
Soy glycinin, 170, 175, 183-5, 212
Soy protein (isolate) (SPI), 6, 168, 169, 170, 172, 173, 191, 192, 197, 211, 214, 215, 365
Soya (soybean) oil, 118, 191, 207, 211
Span-80, 53, 69, 80, 353
Spans and Tweens, 2, 7
Specific acoustic impedance, definition of, 295
Sphingomyelin, 224
Spin-echo NMR, 358-9
Spreading particles, effect on foam stability, 115-19
Stabilizer, use of the term, 2
Starch, 21, 40, 240, 242, 249
Steric repulsion, 57, 59, 67, 72-3, 74
Steric stabilization, 25-6, 72, 178, 183
Stokes' Law, 21, 22
Succinylation of proteins, effect on surface properties, 172-5, 176, 190, 193-4, 198-9, 200
Sucrose (sugar), 26, 34, 211, 242, 243, 258, 259, 266, 270, 271, 301, 307
Sulphur dioxide, 329, 331, 332
Sunflower protein, 168
Surface acoustic wave (SAW), 286
Surface denaturation, 168, 169
Surface dilational elasticity, 104
Surface dilational viscosity, 93, 94, 99, 101, 104
Surface equation of state, 46, 52-5
Surface viscoelasticity in relation to emulsion and foam stability, 31-3, 69, 78, 79, 82, 114, 142, 156, 159, 183, 229
Surface gelation, 138-41
Surface hydrophobicity of proteins, 7, 162, 168, 169-71, 173, 175, 176, 177, 179, 184, 185, 200
Surface pressure
 definition of, 52, 132-3
 proteins, time dependence of, 132-6
Surface rheology of proteins, 9, 10, 31-2, 34, 70, 124, 142-7, 148-54, 157, 171, 175, 183, 184, 185
Surface tension, 6, 19, 20, 52, 91, 93, 96, 97, 102, 107, 108, 113, 116-17, 124, 125, 143, 157, 158, 200-2, 234, 306, 329
 fluctuations, 99, 101
 gradients, 94, 95, 108, 111

- Surfactants. *See* Low-molecular-weight surfactants, and under specific types of surfactant
- Tangential mobility of interface, effect of draining, 77-8
- n*-Tetradecane, 146, 268, 269
- Thermal denaturation of proteins, 29, 169-71
- Thermodynamics of adsorption, 51-5, 126
- Thermodynamics of mixed polymer solutions, 30, 35-41
- Time-dependent surface viscosity, 143, 145
- Triglyceride-water interface, 49, 55, 63, 73
- Triglycerides
crystallization of, 34, 244, 319, 361
solubility in water, 19
water solubility in, 341
- Turbidity of emulsions, 7, 14-15, 16, 18, 19, 31, 171, 214
- Turbulence, 5, 6, 131
- Tween-20, 13
- Tween-60, 201, 202, 203, 207, 209, 210
- Tween-80, 212, 214, 215, 253
- Tweens. *See* Poly(oxyethylene)ated surfactants
- Ultrasonic attenuation
measurements, 290, 317-18
- Ultrasonic scattering, 304-7, 321
- Ultrasonic spectroscopy, 322, 323, 324
- Ultrasonic transducers, 287, 288, 310, 312, 316, 317, 318
- Ultrasonic velocity
measurement of, 287-9, 307-17, 320, 324
variation with particle volume fraction, 23, 296-300, 319
- Ultrasonics, 285-327
applications, 286-7, 319-23
emulsification by, 4, 214, 215, 285
future developments, 323-4
- Ultrasonics—*contd.*
monitoring of creaming by, 23, 320
monitoring of fluid flow by, 307-9
propagation
across boundaries, 295-6
dispersed systems, in, 296-302, 321-2
liquids and solids, in, 289-95, 302
sources of experimental error, 315-17
- Urea denaturation, 174, 261
- Urick equation, 296, 297, 298, 302, 320
- UV spectroscopy of solutes in micelles, 345-6
- van der Waals attraction, 47, 56, 57, 59, 66, 67, 71, 81, 112
- Vegetable fat, 242, 244
- Vegetable oil, 5, 10, 19, 20, 33, 303, 320, 330, 341, 362
- Vesicles, 64
- Vicilin, 35
- Vinegar, 1
- Viscosity modification, effect on foam stability, 105-6
- Viscosity of dispersion medium, 2, 21, 69, 75, 105, 209, 229-30, 249
- von Smoluchowski equation, 47
- Watt principle, 100
- Weighting agent, 19
- Wetting of solid particles at interface, 34, 114
- Whey protein, 142, 173, 222, 223, 228, 242
- Whippability, 196-9
- Whippable cream, 33, 218
- Whipped butter, 252-3
- Whipped cream, 1, 221, 232-51
fat content, effect of, 244
processing, effect of, 249
rheology, 240-51
stabilizers, effect of, 248-9
- Whipped topping, 30
- Whipping, 92-3, 96-7

Whisky, 257, 258, 270

Wine, 272

Xanthan gum, 21, 28, 29, 155, 156,
242

Yeast protein, 172, 177-8

Yield strain of foam, 107

Yield stress

dispersion medium, 21

foam, 107, 109, 111-12, 165