

# POLYMER AUTHOR INDEX VOLUME 27 1986

- Abadie, M. J. M. 2003–2008  
Abdel-Azim, A. 1406–1409  
Abdel-Rehim, F. 1406–1409  
Adam, M. 834–838  
Adams, W. W. 861–865  
Aeiyaeh, S. 1273–1276  
Afanas'eva, N. I. 503–509  
Agarwal, P. K. 1734–1742  
Akbulut, U. 803–806  
Akcasu, A. Z. 1935–1942  
Akovali, G. 1277–1280  
Al-Lamee, K. G. 1981–1985  
Alegria, A. 1771–1776  
Alfonso, G. C. 955–960  
Ali, Sk. A. 1991–1998  
Alimuniar, A. b. 1281–1288  
Alyuruk, K. 2009–2012  
Amano, M. 1559–1562  
Aminabhavi, T. M. 1131–1134, 1396–1399  
Amram, B. 877–882  
Anderson, D. P. 329–336  
Aranguren, M. I. 425–430  
Ardemir, A. B. 441–447  
Aricchi, S. 1761–1767  
Aronson, S. 101–104  
Arora, K. S. 783–796  
Arshady, R. 96–100, 769–775  
Ashida, T. 1007–1013  
Attard, G. S. 185–189  
Aycocock, W. 575–582
- 
- Bailly, C. 776–782, 1410–1415  
Baldrian, J. 1658–1664  
Balsara, N. P. 1637–1649  
Bamford, C. H. 1981–1985  
Banerjee, M. 147–157  
Bantle, S. 728–734  
Barandiaran, J. M. 1771–1776  
Barber, M. 25–33  
Barbucci, R. 1986–1990  
Barelli, N. 937–943  
Barlow, J. W. 1788–1798, 1799–1806  
Barrales-Rienda, J. M. 139–146  
Barson, C. A. 1823–1825  
Bartczak, Z. 537–543, 544–548  
Bartos, J. 281–289  
Bassett, D. C. 344–348, 1163–1169, 1472–1476  
Bauer, B. J. 169–180  
Baumgartner, A. 1777–1780  
Bauwens, J.-C. 709–713  
Bauwens-Crowet, C. 709–713  
Baysal, B. 949–954, 961–968  
Beihoffer, T. W. 1626–1632  
Bekturov, E. A. 1269–1272  
Belakhovsky, M. 883–888, 979–985  
Belfiore, L. A. 80–90  
Benmouna, M. 1935–1942  
Benoit, H. 1935–1942  
Bevington, J. C. 1823–1825  
Bezzabotonov, V. Yu. 839–842, 1241–1246  
Bhat, N. V. 233–240  
Bhattacharya, D. 602–610, 611–618  
Bhoraskar, S. V. 910–912  
Bhowmick, A. K. 1889–1894  
Bik, J. 1441–1442  
Billingham, N. C. 448–454, 1719–1724  
Birshstein, T. M. 1078–1086  
Blackmon, K. P. 1971–1975, 1976–1980  
Blackmore, P. M. 1281–1288, 1296–1303
- Blundell, D. J. 344–348  
Bogoczek, R. 631–634  
Bohdanecky, M. 1948–1950  
Bokobza, L. 877–882  
Bolognesi, A. 1128–1130  
Bonardelli, P. 905–909  
Borisov, O. V. 1078–1086  
Borodin, I. P. 1044–1049  
Boue, F. 1154–1162  
Bradley, D. D. C. 1709–1713  
Brame, E. G. 503–509  
Brash, J. L. 602–610  
Briber, R. M. 66–70  
Brostow, W. 76–79  
Brown, C. S. 448–454, 1719–1724  
Brown, H. R. 1345–1348  
Bubeck, R. A. 393–397  
Buchachenko, A. L. 1014–1021  
Bullock, A. T. 190–194  
Burchard, W. 195–201, 728–734  
Burghardt, W. R. 1585–1594  
Burkhard, L. 1574–1580  
Butzbach, G. D. 1337–1344
- 
- Caceres Alonso, M. 1658–1664  
Cadene, R. M. 2003–2008  
Calvert, P. D. 448–454, 1719–1724  
Cameron, G. G. 437–440, 1420–1422  
Campos, A. 1247–1253  
Cantellani, M. 1128–1130  
Cao, X. 1917–1922, 1923–1927  
Capaccio, G. 363–368  
Carlsson, A. 431–436  
Casolaro, M. 1986–1990  
Cassidy, P. E. 1131–1134, 1396–1399  
Caux, X. 1050–1053, 1749–1752  
Cavaille, J. Y. 549–562, 686–692, 693–702  
Cebe, P. 1183–1192  
Celda, B. 1247–1253  
Challa, G. 256–260  
Chan, R. K. 1907–1911  
Chang, C. 34–46, 1547–1552  
Chang, T. 1705–1708  
Chatzi, E. G. 1850–1854  
Chen-Tsai, C. H. Y. 659–666  
Cheng, W.-z. 1111–1114  
Chisholm, M. S. 437–440, 1420–1422  
Cho, J. 1889–1894  
Chuah, H. H. 241–246, 1022–1029  
Chudnovsky, A. 1377–1384  
Chynoweth, K. R. 1912–1916  
Cimmino, S. 1874–1884  
Clarson, S. J. 91–95, 1633–1636  
Clements, J. 363–368  
Clough, R. L. 225–232  
Coey, J. M. D. 979–985  
Cohen-Addad, J. P. 843–848, 1855–1863  
Colak, N. 2009–2012  
Coles, H. J. 811–816  
Colmenero, J. 1771–1776  
Cook, R. 1895–1898  
Coppola, F. 1874–1884  
Corezzi, S. 1986–1990  
Cortazar, M. 2013–2018  
Coulon, G. 1050–1053, 1749–1752  
Cross, E. M. 861–865  
Cruz, E. M. A. 889–898
- 
- D'Orazio, Maglio L. G. 1874–1884  
Dacheng, W. 1087–1090  
Dake, S. B. 910–912  
Danhelka, J. 1121–1127  
Danusso, F. 1385–1390
- Daoust, D. 776–782, 1410–1415  
Das, N. N. 523–526  
Dautzenberg, H. 944–948  
Davies, G. R. 363–368  
Dawkins, J. V. 931–936, 1170–1176  
de Candia, F. 797–802, 1743–1748  
de Valck, M. 776–782  
del Val, J. J. 1771–1776  
Dekoninck, J. M. 109–117  
Delamar, M. 1273–1276  
Delos, S. E. 11–18  
Delsanti, M. 834–838  
Delu, Z. 1087–1090  
Desai, M. D. B. 96–100  
Dessouky, M. M. El. 1406–1409  
Destri, S. 1128–1130  
Dhooge, N. J. 225–232  
DiMarzio, E. A. 510–516  
Djabourov, M. 1103–1110  
Donners, W. A. B. 993–998  
Dorset, D. L. 1349–1352  
Dorskocilova, D. 1658–1664  
Douy, A. 1513–1520  
Doyle, S. 19–24  
Dubois, J. E. 1273–1276  
Dumelow, T. 1170–1176  
Dusek, K. 925–930  
Duvdevani, I. 1453–1462
- 
- Ebdon, J. R. 1807–1814  
Edwards, C. J. C. 643–650  
Edwards, J. H. 1281–1288  
Edwards, S. F. 483–492  
Eguiazabal, J. I. 2013–2018  
Elliott, D. L. 1976–1980  
Elman, J. F. 747–749, 1058–1062, 1725–1733  
Erre, R. 1513–1520  
Escaig, B. 1050–1053, 1749–1752  
Eshuis, A. 1951–1957  
Etienne, S. 549–562, 686–692
- 
- Fanconi, B. M. 1529–1532  
Faruque, H. S. 527–531  
Feast, W. J. 1281–1288, 1289–1295, 1296–1303  
Fernandes, A. C. 1788–1798, 1799–1806  
Ferry, W. M. 129–132  
Fetters, L. J. 129–132  
Fields, S. D. 1423–1432  
Figueroa, J. E. 1247–1253  
Filisko, F. E. 1943–1947  
Fink, H.-P. 944–948  
Fischer, E. W. 261–264, 1147–1153, 1391–1395  
Fleischer, G. 1091–1097  
Folkes, M. J. 377–383  
Foot, P. J. S. 448–454, 1719–1724  
Francois, J. 459–466, 467–475  
Fratini, A. V. 861–865  
Freedman, A. M. 1163–1169  
Freidenreich, B. 1533–1541  
Frensch, H. 1332–1336  
Fricke, A. L. 619–622  
Friedrich, K. 1753–1760  
Friend, R. H. 1709–1713, 1714–1718  
Froelich, D. 61–65  
Fu, S.-k. 1111–1114  
Funk, W. G. 129–132
- 
- Galembeck, F. 937–943  
Galera Gomez, P. A. 139–146  
Galeski, A. 537–543, 544–548  
Galini, J. C. 459–466, 467–475

## Author index

- Galland, D. 883-888  
Gallot, B. 1513-1520  
Gardner, K. H. 1581-1584  
Gargallo, L. 1416-1419  
Gavara, R. 1247-1253  
Gedde, U. W. 269-274  
Geissler, E. 1489-1492  
Gemmel, P. A. 185-189  
George, M. H. 96-100, 769-775  
Gerenser, L. J. 1058-1062  
Gervais, M. 1513-1520  
Geschke, D. 1091-1097  
Gillen, K. T. 225-232  
Gilmer, J. W. 1391-1395  
Gitzel, J. 1781-1787  
Glass, J. E. 1626-1632  
Gohil, R. M. 1687-1695, 1696-1704  
Gordon Cameron, G. 190-194  
Goritz, D. 817-820  
Graper, J. 1619-1625  
Gray, G. W. 185-189  
Grebowicz, J. 575-582  
Greco, R. 299-308, 1874-1884  
Green, P. F. 1063-1066  
Guenet, J. M. 1098-1102  
Guillot, J. 693-702, 889-898  
Gupta, S. K. 583-591  
Gustafsson, A. 1768-1770  
Gutierrez, R. O. 1725-1733  
Guzman, C. C. 889-898
- 
- Haddaoui, N. 1377-1384  
Hadjichristidis, N. 129-132  
Hagiwara, M. 681-685, 821-826  
Hahn, M. T. 1885-1888  
Hamielec, A. E. 602-610, 611-618  
Hammouda, B. 393-397  
Han, C. C. 1705-1708  
Handwerker, B. 1734-1742  
Hara, T. 986-992  
Harris, R. K. 19-24  
Harrison, I. R. 247-249  
Hashemi, S. 384-392  
Hassan, S. A. 1406-1409  
Havlicek, I. 921-924  
Havriliak, S. Jr. 1509-1512  
Hay, J. N. 677-680  
Hayashi, S. 349-352  
Hazer, B. 961-968  
He, T. 253-255  
Heatley, F. 19-24  
Hecht, A.-M. 1489-1492  
Heermann, D. W. 1777-1780  
Hellmann, F. P. 261-264  
Hemmings, R. L. 1819-1822  
Hendricker, D. G. 1641-1643  
Hernandez-Fuentes, I. 1658-1664  
Herring, F. G. 1493-1496  
Hertzberg, R. W. 1885-1888  
Heymans, N. 1177-1182  
Higgins, J. S. 931-936  
Hill, M. J. 25-33  
Hiller, W. 1353-1358  
Himuro, S. 1761-1767  
Hinkley, J. A. 1368-1376  
Hirao, A. 309-312  
Hlavata, D. 839-842, 925-930, 1241-1246  
Holding, S. R. 1170-1176  
Holland, D. A. 1585-1594  
Hong, S.-D. 1183-1192  
Hoogland, P. 1441-1442, 1443-1452  
Horrión, J. 1815-1818  
Horsky, J. 1948-1950  
Horta, A. 139-146  
Hosea, T. J. C. 1864-1868  
Hourston, D. J. 1807-1814  
Hsu, S. L. 34-46, 1547-1552  
Hu, L. 1574-1580  
Huckerby, T. N. 1823-1825  
Hutchinson, B. H. 623-626
- 
- Ikeda, K. 293-298, 627-630  
Imai, K. 123-128  
Iruin, J. J. 2013-2018  
Ishida, H. 1134-1137, 1400-1405, 1850-1854  
Ishiharada, M. 349-352  
Ishikawa, M. 999-1006, 1521-1528
- 
- Jagannathan, N. R. 1493-1496  
Jain, P. C. 721-727  
Jakes, J. 1658-1664  
Jakeways, R. 1651-1657  
James, D. I. 448-454  
Jarry, J. P. 856-860, 1228-1234  
Jawad, S. A. 363-368, 1201-1210  
Jawitz, K. 101-104  
Jenden, C. M. 217-224  
Jerome, R. 883-888, 1815-1818  
Jiang, C.-y. 1111-1114  
Jiang, M. 1917-1922, 1923-1927, 1928-1934  
Jiang, Y. C. 1193-1200  
Jin, S. R. 592-596  
Johari, G. P. 549-562, 686-692, 866-870, 1907-1911  
Johnson, D. J. 441-447  
Jones, K. M. 602-610  
Jourdan, C. 693-702  
Jue, P. K. 11-18  
Jungnitz, S. 1651-1657  
Juska, T. D. 247-249
- 
- Kaladas, J. J. 1734-1742  
Kampouris, E. M. 1433-1436, 1437-1440  
Kang, E. T. 1958-1962  
Kao, Y. H. 1669-1678, 1679-1686  
Karger-Kocsis, J. 1753-1760  
Karlsson, G. 431-436  
Kasakevich, M. 1345-1348  
Katime, I. 742-746  
Keith, H. D. 1463-1471  
Keller, A. 1835-1844  
Keskkula, H. 211-216  
Khazanovich, T. N. 1044-1049  
Khorramian, B. A. 517-522  
Kiho, H. 1505-1508, 1542-1546  
Kim, M. W. 493-502  
Kim, P. K. 1547-1552  
Kiran, E. 619-622  
Kishore, K. 337-343  
Kiss, M. 817-820  
Klein, P. G. 1807-1814  
Kleman, M. 714-720  
Kobayashi, M. 667-676  
Koberstein, J. T. 1595-1600  
Koenig, J. L. 1134-1137, 1850-1854  
Koetz, J. 1574-1580  
Kolarz, B. N. 1115-1120  
Konaka, T. 1030-1036, 1037-1043, 1553-1558  
Konar, R. S. 147-157  
Kong, X. Z. 693-702  
Kosmas, A. M. 1359-1367  
Kosmas, M. K. 1359-1367  
Kostanski, L. K. 403-408  
Kovarskii, A. L. 1014-1021  
Koyama, N. 293-298  
Kramer, E. J. 1063-1066  
Kranbuehl, D. E. 11-18  
Kratz, M. R. 1641-1643  
Krisyuk, B. E. 1743-1748  
Krolikowski, W. 403-408  
Kudaibergenov, S. E. 1269-1272  
Kugler, J. 1391-1395  
Kumar, A. 583-591, 1261-1268  
Kumar, S. 329-336  
Kunze, J. 944-948
- 
- La Perriere, D. M. 1999-2002  
Labsky, J. 839-842  
Lacabanne, C. 527-531
- 
- Lacaze, P. C. 1273-1276  
Lacey, D. 185-189  
Lafuma, F. 133-138  
Lam, P.-t. 1441-1442  
Lando, J. B. 1963-1966  
Lane, J. M. 19-24  
Lanzetta, N. 299-308  
Lapp, A. 1410-1415  
Larabee, J. 1734-1742  
Lark, G. 25-33  
Lawton, J. B. 735-741  
LeBourvellec, G. 856-860  
Leblond, J. 1103-1110  
Lee, I.-H. 1219-1227  
Lefelar, J. A. 3-10  
Legras, R. 109-117, 776-782, 1410-1415  
Liao, C. T. 265-268  
Lim, P. K. 34-46  
Lindenberger, H. 1709-1713  
Lindman, B. 431-436  
Linow, K. J. 1574-1580  
Liu, S. 360-362  
Liu, T.-M. 247-249  
Liu, Y. 1928-1934  
Llauró-Darricades, M. F. 889-898  
Lockslin, B. V. 503-509  
Loufakis, K. 563-574  
Lowry, R. E. 1529-1532  
Lucki, J. 1193-1200  
Lundberg, R. D. 493-502, 1453-1462  
Luzzati, S. 834-838
- 
- MacArthur, A. 1889-1894  
MacKnight, W. J. 659-666  
Macosko, C. W. 1235-1240  
Maghami, G. G. 931-936  
Maglio, G. 299-308, 797-802  
Mahboubian-Jones, M. G. B. 455-458  
Maisey, L. J. 1170-1176  
Maklakov, A. I. 290-292  
Malinconico, M. 299-308, 1874-1884  
Manaresi, P. 955-960  
Mancarella, Ragosta, M. G. 1874-1884  
Mansimov, S. A. 1014-1021  
Manson, J. A. 1885-1888  
Maquet, J. 1103-1110  
Marchenko, G. N. 597-601  
Marquez, J. 1304-1306  
Marsano, E. 118-122  
Marseglia, E. A. 1714-1718  
Martuscelli, E. 299-308, 1874-1884  
Masse, M. A. 619-622  
Matsuzawa, S. 999-1006, 1521-1528  
Mays, J. W. 129-132  
Mazelet, G. 714-720  
McAlea, K. P. 1581-1584  
McCormick, C. L. 623-626, 1971-1975, 1976-1980  
McCrum, N. G. 47-60  
McGarey, B. 1315-1324  
McHugh, A. J. 1585-1594  
McIntyre, D. 1889-1894  
McKenna, G. B. 1368-1376  
McLeod, G. G. 455-458  
Meagher, A. 979-985  
Meille, S. V. 1665-1668  
Menolasina, S. 1304-1306  
Mercier, J. P. 109-117, 776-782, 1410-1415  
Merdrignac, F. 883-888  
Meyer, G. C. 592-596  
Michler, G. H. 323-329  
Middleton, I. P. 1981-1985  
Mijnlieff, P. F. 1951-1957  
Mildner, D. F. R. 393-397  
Miles, I. S. 190-194  
Mills, P. J. 677-680, 1063-1066  
Miltz, J. 105-108  
Miyaji, H. 1505-1508, 1542-1546  
Miyamoto, Y. 1542-1546  
Miyasaka, K. 999-1006, 1521-1528

- Mizugochi, K. 999–1006  
Mizuguchi, K. 1521–1528  
Moet, A. 1377–1384  
Moggi, G. 905–909  
Monnerie, L. 181–184, 549–562, 686–692, 856–860, 877–882, 1228–1234, 1869–1873  
Moustafa, S. S. 1406–1409  
Muller, R. 61–65  
Muller, W. F. 76–79  
Mumby, S. J. 1826–1828  
Munari, A. 955–960  
Munoz, M. I. 1416–1419  
Munstedt, H. 899–904  
Murakami, K. 398–402, 1563–1568  
Murata, Y. 1054–1057  
Mutin, P. H. 1098–1102
- 
- Naik, S. G. 233–240  
Nakafuku, C. 353–359  
Nakagawa, H. 1497–1504  
Nakagawa, K. 1030–1036, 1037–1043, 1553–1558, 1559–1562  
Nakahama, S. 309–312  
Narasimhan, N. S. 910–912  
Nauman, E. B. 1637–1649  
Neoh, K. G. 1958–1962  
Ng, S. C. 1864–1868  
Nguyen, H. X. 1400–1405  
Nicolais, L. 921–924  
Nield, E. 109–117  
Nilsson, P.-G. 431–436  
Nishijima, Y. 1705–1708  
Nojima, S. 1007–1013  
Nose, T. 1071–1077  
Nugmanov, O. K. 597–601  
Nunes, S. P. 937–943
- 
- Ochi, M. 1569–1573  
Oganjanovic, R. 677–680  
Oh, T. G. 261–264  
Ohno, H. 1781–1787  
Ohyanagi, M. 627–630  
Oikawa, H. 398–402, 1563–1568  
Olley, R. H. 344–348, 1163–1169  
Ong, Y. K. 1958–1962  
Orchard, B. J. 1533–1541  
Orchard, G. A. J. 1201–1210  
Ors, J. A. 1999–2002  
Ortega, J. M. 1304–1306  
Ostanevich, Yu. M. 839–842, 925–930, 1241–1246  
Ottino, J. M. 1423–1432  
Ozden, T. 2009–2012  
Ozkan, A. 1277–1280
- 
- Packer, K. J. 19–24  
Padden, F. J. Jr. 1463–1471  
Palumbo, R. 299–308, 797–802  
Papaspnyrides, C. D. 1433–1436, 1437–1440, 1967–1970  
Papon, P. 1103–1110  
Parsons, W. F. 1725–1733  
Passaglia, E. 510–516  
Patel, A. 517–522  
Pathmanathan, K. 1907–1911  
Patil, P. A. 910–912  
Paul, D. R. 211–216, 1788–1798, 1799–1806  
Peiffer, D. G. 493–502, 1453–1462, 1734–1742  
Perez, J. 549–562, 686–692, 693–702  
Perez de Marquez, O. 1304–1306  
Pertsin, A. J. 597–601  
Pestil, J. 925–930  
Pethrick, R. A. 19–24, 455–458  
Petracone, V. 1665–1668  
Petrocelli, V. 797–802  
Petrus, V. 1948–1950  
Pham, Q. T. 459–466, 467–475  
Philipp, B. 944–948
- 
- Phillips, P. J. 1669–1678, 1679–1686, 1687–1695, 1696–1704  
Pichot, C. 693–702, 889–898  
Picot, C. 1595–1600  
Pilati, F. 955–960  
Pineri, M. 883–888, 979–985  
Pirozzi, B. 1665–1668  
Plestil, J. 839–842, 1241–1246  
Pochan, D. F. 747–749  
Pochan, J. M. 747–749, 1058–1062, 1725–1733  
Pokorny, S. 1121–1127  
Popov, A. A. 1743–1748  
Porter, R. S. 241–246, 1022–1029  
Porzio, W. 1128–1130  
Pouchelon, A. 843–848  
Pracella, M. 537–543  
Pratt, G. J. 1483–1488  
Pu, Z. 275–280
- 
- Queslel, J.-P. 1869–1873  
Queslel, J. P. 877–882, 1228–1234  
Quintana, J. R. 742–746
- 
- Rabek, J. F. 1193–1200  
Radic, D. 1416–1419  
Ragosta, G. 299–308  
Ramelow, U. 949–954  
Ranby, B. 313–318, 1193–1200  
Rao, V. V. R. N. 523–526  
Reddy, B. S. R. 96–100, 769–775  
Reginato, G. 1986–1990  
Reip, P. W. 377–383  
Renyuan, Q. 1087–1090  
Ricard, A. 133–138  
Riccardi, C. C. 913–920  
Richards, R. W. 643–650, 1315–1324  
Rietsch, F. 532–536, 703–708  
Rios, G. L. 889–898  
Rodehed, C. 313–318  
Rodriguez, E. L. 1943–1947  
Roth, S. 1709–1713  
Russell, T. P. 261–264  
Russo, R. 797–802, 1743–1748  
Russo, S. 955–960
- 
- Sadler, D. M. 25–33  
Saito, S. 349–352  
Saiz, E. 139–146  
Sakamoto, N. 1761–1767  
Samulski, E. T. 1826–1828  
Sano, H. 1497–1504  
Sardharwalla, I. 735–741  
Sartirana, M. L. 955–960  
Sasaki, S. 849–855  
Sastri, S. 583–591  
Sasuga, T. 681–685, 821–826  
Scarinzi, G. 299–308  
Schatzel, K. 195–201  
Schenk, W. 1353–1358  
Schmidt, P. 1658–1664  
Schneider, B. 1658–1664  
Schneider, N. S. 659–666  
Schomaker, E. 256–260  
Schultz, J. M. 651–658, 1219–1227, 1581–1584  
Schulz, D. N. 1734–1742  
Schwartz, A. 1619–1625  
Schwarz, M. 211–216  
Seguela, R. 532–536, 703–708  
Sekine, Y. 293–298, 627–630  
Sekiyama, Y. 293–298  
Semlyen, J. A. 91–95, 1633–1636  
Sevreugin, V. A. 290–292  
Shahada, L. A. H. 1289–1295  
Shakir, S. A. 931–936  
Shimbo, M. 1569–1573  
Sigitov, V. B. 1269–1272  
Sikkema, D. J. 1441–1442, 1443–1452  
Simon, R. 811–816
- 
- Sjoerdsma, S. D. 164–168  
Skirda, V. D. 290–292  
Slomkowski, S. 71–75  
Smallwood, P. V. 1609–1618  
Smigasiewicz, S. 1067–1070  
Smith, B. A. 1826–1828  
Smith, M. J. A. 1483–1488  
Smith, P. 1845–1849  
Sokolowski, M. M. 1714–1718  
Song, J. H. 1815–1818  
Soni, Garner L., R. T. 1734–1742  
Sperling, L. H. 1885–1888  
Spevacek, J. 1121–1127  
Stachurski, Z. H. 1912–1916  
Stadler, R. 1254–1260  
Steinmeier, H. 1601–1608  
Stepto, R. F. T. 643–650  
Stevenson, A. 1211–1218  
Stivala, S. S. 517–522  
Straube, E. 1091–1097  
Strazielle, C. 742–746, 1410–1415  
Strobl, G. R. 1147–1153  
Sugg, H. 1619–1625  
Sun, Z. 1899–1906  
Sundberg, D. C. 265–268  
Surowiec, J. 631–634
- 
- Takahashi, M. 1071–1077  
Takayanagi, M. 1054–1057  
Tan, T. C. 1958–1962  
Tanabe, Y. 1147–1153  
Tanaka, S. 123–128  
Tanigami, T. 999–1006, 1521–1528  
Tant, M. R. 1815–1818  
Tashiro, K. 667–676  
Teoh, H. 101–104  
Terashima, Y. 1007–1013  
Termonia, Y. 1845–1849  
Tezuka, Y. 123–128  
Thakur, M. 1963–1966  
Theveneau, H. 1103–1110  
Thirion, P. 1869–1873  
Thomas, E. L. 66–70, 659–666, 1423–1432  
Tieghi, G. 1385–1390  
Tino, J. 281–289  
Tjerneld, F. 1768–1770  
Toda, A. 1505–1508  
Toman, L. 1121–1127  
Tomka, J. G. 441–447  
Toppare, L. 803–806  
Torbet, J. 1489–1492  
Tornell, B. E. 250–252  
Towlson, S. M. 409–416, 417–424  
Tran-Cong, Q. 1705–1708  
Tripathy, S. K. 1533–1541  
Truong, N. D. 459–466, 467–475  
Trzebicka, B. 1067–1070  
Trznadel, M. 871–876  
Tsonis, C. P. 1991–1998  
Tsuchida, E. 1781–1787  
Turner, D. T. 1619–1625  
Turro, N. J. 783–796  
Turska, E. 1067–1070  
Turturro, A. 905–909
- 
- Ucar, G. 2013–2018  
Ueno, Y. 293–298, 627–630  
Ungar, G. 1835–1844  
Urban, M. W. 1850–1854  
Usami, T. 1497–1504  
Uustalu, J. M. 250–252
- 
- Valenciano, R. 742–746  
Van Dang, N. 979–985  
Vanzielegheem, A. 109–117  
Vasanthakumari, R. 337–343  
Vaughan, A. S. 1163–1169, 1472–1476  
Vercauteren, F. F. 993–998  
Viallat, A. 843–848, 1855–1863  
Vickers, M. E. 1719–1724

## Author index

Vickerstaff, N. 1823–1825  
Vignaud, R. 651–658  
Vilgis, T. 1154–1162  
Vilgis, Th. 483–492  
Viney, C. 1325–1331  
Viogy, J. L. 181–184  
Vittoria, V. 1743–1748  
Vlaic, G. 883–888, 979–985  
Vogl, O. 1574–1580  
Vorenkamp, E. J. 256–260

Wade Adams, W. 329–336  
Wahal, S. 583–591  
Walczynski, B. 1115–1120  
Walker, N. S. 448–454  
Wallace, R. J. 1131–1134  
Wang, C. H. 261–264  
Wang, F. W. 1529–1532  
Wang, S.-T. 1637–1649  
Ward, I. M. 363–368, 1201–1210, 1651–1657  
Watson, S. D. 455–458  
Watts, D. G. 1509–1512  
Wazeer, M. I. M. 1991–1998  
Weale, K. E. 1819–1822  
Weber, M. 1254–1260  
Weiss, R. A. 3–10  
Wellinghoff, S. T. 1235–1240  
Wendorff, J. H. 1332–1336, 1337–1344

Wennerstrom, H. 1768–1770  
Wenzel, M. 195–201  
Werstler, D. D. 750–756, 757–764  
Whitaker, R. B. 861–865  
Wignall, G. D. 1345–1348, 1581–1584  
Wilensky, S. 101–104  
Wilkes, G. L. 1815–1818  
Williams, C. 979–985  
Williams, G. 185–189  
Williams, J. G. 384–392  
Williams, J. L. 1619–1625  
Williams, R. J. J. 425–430, 913–920  
Wilson, B. 1281–1288  
Windle, A. H. 1325–1331  
Winkler, D. A. 765–768  
Winnik, M. A. 1826–1828  
Wiswe, D. 1391–1395  
Woehrl, D. 1781–1787  
Wright, P. V. 409–416, 417–424  
Wu, W. 169–180  
Wunderlich, B. 563–574, 575–582

Xie, H. 1928–1934  
Xu, G. 1134–1137  
Xu, M. 360–362  
Xu, R.-y. 1111–1114  
Xu, Y. Y. 1547–1552

Yadav, Y. S. 721–727

Yakovlev, V. A. 503–509  
Yamada, K. 1054–1057  
Yamamoto, T. 986–992  
Yamaura, K. 999–1006, 1521–1528  
Yang, W. P. 1235–1240  
Yeung, P. H. J. 202–210  
Yoshida, M. 1761–1767  
Yoshio, H. 627–630  
Yoshiyama, T. 827–833  
Young, R. J. 202–210  
Yu, L.-P. 1826–1828  
Yu, T.-y. 1111–1114  
Yu, T. 1917–1922, 1923–1927, 1928–1934  
Yurttas, B. 803–806

Zachmann, H.-G. 1391–1395  
Zaijian, S. 275–280  
Zaikov, G. E. 1743–1748  
Zang, Y. H. 61–65  
Zhang, X. 360–362  
Zhou, P. 1899–1906  
Zhou, T. 1899–1906  
Zhu, S. 1569–1573  
Zhu, W. 360–362  
Zhulina, E. B. 1078–1086  
Zimmermann, H. J. 1337–1344  
Zugenmaier, P. 1601–1608

# POLYMER CLASSIFIED CONTENTS VOLUME 27 1986

## Acid catalyst

Polyamidation  
Catalyst, 1433–1436

## Acrylamide

Copolymer  
Water, 623–626  
Microstructure  
Copolymerization, 467–475

## Acrylamide copolymers

Copolymerization  
Structure, 1971–1975  
Solution properties  
Polycation, 1976–1980

## Acrylonitrile

Poly(dimethylsiloxane)  
Reaction rate, 1420–1422

## Activation energy

Depolarization  
Relaxation, 1014–1021

## Adhesion

Orientation  
Polypropylene laminates, 1219–1227

## Adsorption

Gel  
Methyl orange, 627–630  
Siloxane  
Silica, 843–848

## Ageing

Shear  
Glass, 686–692

## Aggregation

Mechanical properties  
Poly(diisopropyl fumarate), 1054–1057  
Polymerization  
Poly(vinyl chloride), 1609–1618

## Alcohol-ether conversion

Synthesis  
Cycloheptane, 1441–1442

## Alkyl groups

Polyethylene  
Kinetics, 281–289

## Anionic polymerization

Polymerization  
Vinyl(diisopropylbenzamide), 309–312

## Annealing

Extrusion  
Nylon gel, 1022–1029  
Glass transition temperature  
Polycarbonate, 709–713

## Bending behaviour

Styrene-butadiene rubber  
Poly(vinyl chloride), 1899–1906

## Birefringence

Elongational flow  
Rod-like polymer, 493–502  
Polyacrylamide  
Photoelasticity, 1489–1492

## Blend

Crystallization  
Polypropylene, 544–548  
Glass transition  
Molecular weight, 747–749

## Polystyrene

Differential thermal  
analysis, 549–562  
X-ray diffraction  
Morphology, 1007–1013

## Block copolymers

Miscibility studies  
Nuclear magnetic resonance, 80–90  
Peroxycarbamate  
Synthesis, 961–968  
Polypeptide  
Electron spectroscopy, 1513–1520  
Synthesis  
Poly(amidoether), 797–802

## Branches

FT nuclear magnetic resonance  
Polyethylene, 677–680

## Branching

Epoxy resins

Molecular weight, 728–734

## Brillouin scattering

Hydrogels  
Poly(vinyl alcohol), 1864–1868  
Structural relaxation  
Rayleigh scattering, 261–264  
Butylchloride/boron trichloride  
Isobutylene  
Synthesis, 1121–1127

## Calorimetry

Complexation  
Poly(amido-amine), 1986–1990  
Enthalpy  
Dyes, 735–741

## Carboxyphenyl acrylate

Copolymerization  
Vinyl-2-pyrrolidone, 96–100

## Catalase-like activity

Complexation  
Polyampholytes, 1269–1272

## Catalysis

Polysiloxane  
Conformation, 293–298

## Catalyst

Polyamidation  
Acid catalyst, 1433–1436  
Nylon salt, 1437–1440

## Cathodic reduction

Electrochemical polymerization  
Styrene, 1304–1306

## Cellulose

Crystal structure  
Polymorphism, 597–601  
Dynamic light scattering  
Diffusion, 195–201  
Wide-angle X-ray scattering  
Composition, 944–948

## Cellulose acetate

Membrane  
Osmosis, 937–943

- Nuclear magnetic resonance
  - Morphology, 19–24
- Cellulose nitrate**
  - Conformation
    - Nuclear magnetic resonance, 765–768
- Chain conformation**
  - Small-angle X-ray scattering
    - Crystallization, 651–658
- Chain dynamics**
  - Fluorescence depolarization
    - Elastomer, 1228–1234
- Chain flexibility**
  - Solution properties
    - Poly(2-thiophenemethyl MA), 1416–1419
    - Poly(*p*-tert-butylstyrene), 129–132
  - Stress
    - Thermal degradation, 253–255
- Chain folding**
  - Polypropylene
    - Crystallinity, 1665–1668
- Characterization**
  - Copolymerization
    - Acetylenes, 1991–1998
  - Gel permeation chromatography
    - Light scattering, 1170–1176
  - Hydrogels
    - Poly(vinyl pyrrolidone), 1619–1625
  - Nuclear magnetic resonance
    - Siloxane–silica networks, 1855–1863
  - Poly(phenylmethyl siloxanes)
    - Ring-chain equilibration, 1633–1636
  - Synthesis
    - Poly(ethylene terephthalate), 955–960
- Charge density**
  - Complexes
    - Polyelectrolytes, 1574–1580
- Chemical degradation**
  - Poly(ethylene terephthalate)
    - Morphology, 233–240
- Chromatography**
  - Molecular weight
    - Polycarbonate, 1410–1415
  - Polycarbonate
    - Separation, 776–782
- Colloidal crystal**
  - Latex
    - Suspension, 827–833
- Comb-branched polymers**
  - Polyacetylene
    - Synthesis, 1128–1130
- Complex plane**
  - Dielectric dispersion
    - Poly(vinyl acetate), 1509–1512
- Complexation**
  - Calorimetry
    - Poly(amido-amine), 1986–1990
  - Poly(methyl methacrylate)
    - Temperature dependence, 256–260
  - Polyamides
    - Nuclear magnetic resonance, 133–138
  - Polyampholytes
    - Catalase-like activity, 1269–1272
- Complexes**
  - Charge density
    - Polyelectrolytes, 1574–1580
  - Pyrene
    - Solution properties, 783–796
- Composites**
  - Fracture
    - Filler, 1385–1390
  - Stress distribution
    - Spectroscopic analysis, 1547–1552
- Composition**
  - Cellulose
    - Wide-angle X-ray scattering, 944–948
- Conducting polymers**
  - Polypyrrole
    - Poly(thiophene), 1533–1541
- Conduction**
  - Poly(ethylene-2,6-naphthalate)
    - Crystallinity, 349–352
- Conductivity**
  - Humidity sensor
    - Poly(tetrafluoroethylene), 910–912
  - Polymerization
    - Polyacetylene, 1963–1966
    - Vinyl chloride, 250–252
  - Polypyrrole
    - Ion exchange, 899–904
    - Polymerization, 1958–1962
- Configuration**
  - Light scattering
    - Solution properties, 834–838
- Conformation**
  - Amylose triesters
    - X-ray scattering, 1601–1608
  - Catalysis
    - Polysiloxane, 293–298
  - Cellulose nitrate
    - Nuclear magnetic resonance, 765–768
  - Irreversibility
    - Poly(methacrylic acid), 417–424
  - Small-angle neutron scattering
    - Copolymer, 643–650
- Continuous flow reactor**
  - Molecular weight distribution
    - Polymerization, 1261–1268
- Copolymer**
  - Acrylamide
    - Water, 623–626
  - Ferroelectric polarization
    - Vinylidene fluoride, 667–676
  - Small-angle neutron scattering
    - Conformation, 643–650
  - Transition phenomena
    - Ethylene-tetrafluoroethylene, 1521–1528
- Copolymer blends**
  - Phase separation
    - Miscibility studies, 1917–1922
- Copolymerization**
  - Acrylamide copolymers
    - Structure, 1971–1975
  - Carboxyphenyl acrylate
    - Vinyl-2-pyrrolidone, 96–100
  - Characterization
    - Acetylenes, 1991–1998
  - Diffusion
    - Modelling, 611–618
  - Electroinitiation
    - Ultrasound, 803–806
  - Mechanical properties
    - Latex, 693–702
  - Microstructure
    - Acrylamide, 467–475
  - Modelling
    - Diffusion, 602–610
  - Saponification
    - Vinyl copolymers, 123–128
- Cosolvent mixtures**
  - Second virial coefficient
    - Solvation, 1247–1253
- Crack growth**
  - Fracture toughness
    - Polyethylene, 384–392
- Crack propagation**
  - Ductile fatigue
    - Polycarbonate, 1377–1384
  - Fatigue
    - Nylon-6,6, 1885–1888
  - Impact energy
    - Plastic pipes, 76–79
- Crazing**
  - Polystyrene
    - Glycerol, 164–168
- Critical point**
  - Quasi-elastic light scattering
    - Dynamic properties, 1071–1077
- Crosslinking**
  - Morphology
    - Polyethylene, 1696–1704
- Polyisoprene
  - Domain, 1115–1120
- Crystal growth**
  - Polyethylene
    - Crystal habit, 510–516
    - Crystallization, 1505–1508
- Crystal habit**
  - Crystal growth
    - Polyethylene, 510–516
  - Morphology
    - Poly(butylene terephthalate), 66–70
- Crystal modulus**
  - Polyoxymethylene
    - Morphology, 1651–1657
- Crystal structure**
  - Cellulose
    - Polymorphism, 597–601
  - X-ray diffraction
    - Ethylentetrafluoroethylene, 999–1006
- Crystallinity**
  - Conduction
    - Poly(ethylene-2,6-naphthalate), 349–352
  - Polyethylene
    - Drawing, 532–536
  - Polypropylene
    - Chain folding, 1665–1668
  - Tensile strain
    - Ethylene, 703–708
- Crystallization**
  - Gel
    - Rubber, 1889–1894
  - Melting
    - Polypropylene, 721–727
  - Morphology
    - Poly(aryl-ether-ether-ketone), 329–336
    - Polyethylene, 1687–1695
  - Nucleation
    - Polycaprolactone, 1912–1916
  - Nylon
    - Supercooling, 1542–1546
  - Poly(aryl-ether-ether-ketone)
    - D.s.c., 1183–1192
  - Poly(ethylene terephthalate)
    - Nucleating agent, 109–117
  - Polycarbonate blends
    - Solution properties, 1788–1798
  - Polyethylene
    - Crystal growth, 1505–1508
    - Growth morphology, 1585–1594
    - Kinetics, 1679–1686
    - Oriented polymer, 817–820
    - Polybutene, 337–343
    - Structure, 1669–1678
    - Twin morphology, 25–33
  - Polypropylene
    - Blend, 544–548
  - Rubber
    - Strain, 1211–1218
  - Small-angle X-ray scattering
    - Chain conformation, 651–658
    - Paraffins, 1835–1844
  - Spherulite
    - Morphology, 1463–1471, 1472–1476
  - Stress
    - Orientation, 856–860
  - Thermotropic behaviour
    - Rigid rod polymer, 1337–1344
- Cure monitoring**
  - Fluorescence spectroscopy
    - Epoxy resins, 1529–1532
- Cycloheptane**
  - Alcohol–ether conversion
    - Synthesis, 1441–1442
- Decomposition**
  - Thermogravimetric analysis,
    - Bornyl acrylate monomer, 1999–2002
- Defects**
  - Polyester
    - Nematic structure, 714–720

## Subject index

- Deformation**  
Molecular orientation  
Rubber elasticity, 1177–1182  
Plastic  
Polypropylene, 247–249  
Rubber elasticity  
Entanglements, 483–492
- Density profiling**  
Oxidation  
Diffusion, 225–232
- Depolarization**  
Relaxation  
Activation energy, 1014–1021
- Derivatization**  
E.s.c.a.  
Poly(ethylene terephthalate), 1058–1062
- Devolatilization**  
Microdispersions  
Polymer blends, 1637–1649
- Dextran**  
Esterification  
Graft copolymers, 1981–1985
- Diallyl benzene dicarboxylates**  
Temperature effects  
Polymerization, 403–408
- Dichroism**  
FT infra-red spectroscopy  
Polyisoprene, 877–882
- Dielectric dispersion**  
Complex plane  
Poly(vinyl acetate), 1509–1512
- Dielectric properties**  
Poly(methyl methacrylate)  
Gamma irradiation, 1483–1488  
Polymerization  
Polyimide, 11–18
- Dielectric relaxation**  
Glass transition  
Polyarylate, 1771–1776  
Mechanical relaxation  
Epoxy resin, 1569–1573  
Molecular dynamics  
Liquid crystalline polymer, 185–189  
Poly(propylene oxide)  
Glass transition temperature, 866–870
- Diethyl cinnamate**  
Polymerization  
Diethyl fumarate, 1819–1822
- Diethyl fumarate**  
Polymerization  
Diethyl cinnamate, 1819–1822
- Differential scanning calorimetry**  
Crystallization  
Poly(aryl-ether-ether-ketone), 1183–1192  
Ethyl hydroxyethyl cellulose  
Hydration, 431–436
- Differential thermal analysis**  
Blend  
Polystyrene, 549–562  
Polyethylene  
Melting, 353–359
- Diffusion**  
Copolymerization  
Modelling, 602–610, 611–618  
Dynamic light scattering  
Cellulose, 195–201  
Inverse gas chromatography  
Styrene, 105–108  
Melt  
Ion beam, 1063–1066  
Oxidation  
Density profiling, 225–232
- Diffusion coefficient**  
Poly(propylene oxide)  
Temperature dependence, 1826–1828
- Dipyridylamine**  
Transition metal complexes  
Synthesis, 1641–1643
- Disintegration**
- Network  
Electron beam, 681–685
- Domain**  
Polyisoprene  
Crosslinking, 1115–1120
- Drawing**  
Nylon  
Plasticization, 241–246  
Poly(ethylene terephthalate)  
Dynamic modulus, 1559–1562  
Small-angle neutron scattering, 1391–1395  
Poly(oxymethylene)  
Dynamic modulus, 1030–1036  
Mechanical properties, 1037–1043  
Polyethylene  
Crystallinity, 532–536  
Polyoxymethylene  
Tensile load, 1553–1558
- Ductile fatigue**  
Crack propagation  
Polycarbonate, 1377–1384
- Durham precursor route**  
Kinetics  
Poly(acetylene), 448–454  
Polyacetylene  
Orientation, 1714–1718
- Dyes**  
Calorimetry  
Enthalpy, 735–741
- Dynamic light scattering**  
Cellulose  
Diffusion, 195–201
- Dynamic mechanical analysis**  
Interpenetrating networks  
Morphology, 1807–1814
- Dynamic modulus**  
Poly(ethylene terephthalate)  
Drawing, 1559–1562  
Poly(oxymethylene)  
Drawing, 1030–1036
- Dynamic properties**  
Monte-Carlo simulation  
Relaxation, 1777–1780  
Quasi-elastic light scattering  
Critical point, 1071–1077
- Dynamic scattering function**  
Random Phase Approximation  
Rouse dynamics, 1935–1942
- Dynamics**  
Poly(ethylene oxide)  
Water, 1951–1957  
Polyethylene  
Nuclear magnetic resonance, 1658–1664  
Polystyrene  
Fluorescence anisotropy decay, 181–184
- 
- E.s.c.a.**  
Poly(ethylene terephthalate)  
Derivatization, 1058–1062
- EXAFS**  
Microstructure  
Polybutadiene, 979–985
- Elastomer**  
Fluorescence depolarization  
Chain dynamics, 1228–1234
- Elastomer laminate**  
Permeation  
Rubber, 1396–1399
- Electric field**  
Polysiloxane  
Liquid crystals, 811–816
- Electrical properties**  
Stretching  
Polyimide, 360–362
- Electroactivity**  
Modification  
Synthesis  
769–775
- Electrochemical polymerization**  
Styrene  
Cathodic reduction, 1304–1306  
Synthesis  
Poly(di-(thienyl-pyrrole)), 455–458  
X-ray diffraction  
Polyethylene sulphide, 1273–1276
- Electrochemical properties**  
Poly(acrylonitrile),  
Poly(vinylpyridine), 101–104
- Electron beam**  
Disintegration  
Network, 681–685  
Mechanical relaxation  
Poly(aryl-ether-ether-ketone), 821–826
- Electron microscopy**  
Morphology  
Mechanical microprocesses, 323–329  
Polydiacetylene  
Lattice imaging, 202–210  
Polymerization  
Polyurethane, 1423–1432  
Small-angle X-ray scattering  
Polyurethane, 659–666
- Electron spectroscopy**  
Microstructure  
Polybutadiene networks, 883–888  
Polypeptide  
Block copolymers, 1513–1520
- Electron spin resonance**  
Poly(vinyl acetate)  
Glass transition temperature, 190–194  
Ultraviolet  
Surface reaction, 949–954
- Electron transfer**  
Metallo-porphyrins  
Polystyrene, 1781–1787
- Electroinitiation**  
Copolymerization  
Ultrasound, 803–806
- Elongational flow**  
Rod-like polymer  
Birefringence, 493–502
- Emulsion polymerization**  
Methyl acrylate  
Kinetics, 147–157  
Molecular weight  
Reaction rate, 265–268
- Engineering polymers**  
Polymerization,  
Hydrophilic Modification, 1626–1632
- Entanglements**  
Rubber  
Neutron scattering, 1154–1162  
Rubber elasticity  
Deformation, 483–492  
Self-diffusion  
Poly(ethylene glycol), 290–292
- Enthalpy**  
Calorimetry  
Dyes, 735–741
- Epoxy compounds**  
Pyridine  
Pyridone, 1134–1137
- Epoxy resin**  
Mechanical relaxation  
Dielectric relaxation, 1569–1573  
Nuclear magnetic resonance  
Proton spectrum, 1493–1496
- Epoxy resins**  
Branching  
Molecular weight, 728–734  
Fluorescence spectroscopy  
Cure monitoring, 1529–1532  
Neutron scattering  
Network, 169–180
- Esterification**  
Dextran  
Graft copolymers, 1981–1985
- Ethyl hydroxyethyl cellulose**

- Differential scanning calorimetry  
Hydration, 431–436
- Ethylene**  
Tensile strain  
Crystallinity, 703–708
- Ethylene-hexene-1 copolymer**  
Mechanical behaviour  
X-ray diffraction, 363–368
- Ethylene-tetrafluoroethylene**  
Transition phenomena  
Copolymer, 1521–1528  
X-ray diffraction  
Crystal structure, 999–1006
- Extrusion**  
Nylon gel  
Annealing, 1022–1029
- 
- Failure**  
Polystyrene  
Rubber, 211–216
- Fatigue**  
Crack propagation  
Nylon-6,6, 1885–1888  
Poly(aminobismaleimide) resin  
Plastic deformation, 1749–1752
- Ferroelectric polarization**  
Copolymer  
Vinylidene fluoride, 667–676
- Fibre**  
Poly(ether-ether-ketone)  
X-ray diffraction, 861–865
- Fibre failure**  
Kinetics  
Kevlar, 1895–1898
- Filler**  
Fracture  
Composites, 1385–1390
- Film**  
Thermally stimulated discharge currents  
Poly(vinyl formal), 523–526
- Flexibility**  
Monte-Carlo calculation  
Random walk, 1087–1090
- Fluorescence anisotropy decay**  
Dynamics  
Polystyrene, 181–184
- Fluorescence depolarization**  
Chain dynamics  
Elastomer, 1228–1234
- Fluorescence spectroscopy**  
Cure monitoring  
Epoxy resins, 1529–1532  
Polystyrene  
Photodegradation, 1193–1200
- Fluoropolymer**  
Glass transition temperature,  
Copolymers, 905–909  
Nuclear magnetic resonance  
Polymerization, 1296–1303  
Polymerization  
Catalysts, 1281–1288  
Monomer structure, 1289–1295
- Formaldehyde**  
Nuclear magnetic resonance  
Resin, 750–756, 757–764
- FT infra-red spectroscopy**  
Dichroism  
Polyisoprene, 877–882  
Network  
Polyurethane, 592–596
- FT nuclear magnetic resonance**  
Polyethylene  
Branches, 677–680
- Fracture**  
Composites  
Filler, 1385–1390
- Fracture toughness**  
Glass-fibre composite  
Poly(ether-ether-ketone), 1753–1760
- Polyethylene  
Crack growth, 384–392
- 
- Gamma irradiation**  
Dielectric properties  
Poly(methyl methacrylate), 1483–1488
- Gel**  
Crystallization  
Rubber, 1889–1894  
Methyl orange  
Adsorption, 627–630  
Poly(vinyl chloride)  
Light scattering, 1098–1102
- Gel collapse**  
Saponification  
Swelling behaviour, 313–318
- Gel permeation**  
Intrinsic viscosity  
Polydispersity, 139–146
- Gel permeation chromatography**  
Characterization  
Light scattering, 1170–1176  
Thermal degradation  
Urethane copolymers, 1235–1240
- Gelatin**  
Nuclear magnetic resonance  
Network, 1103–1110
- Gibbs-DiMarzio theory**  
Glass transition  
Thermodynamics, 921–924
- Glass**  
Shear  
Ageing, 686–692
- Glass transition**  
Dielectric relaxation  
Polyarylate, 1771–1776  
Gibbs-DiMarzio theory  
Thermodynamics, 921–924  
Mixture  
Differential scanning calorimetry,  
619–622  
Molecular weight  
Blend, 747–749
- Glass transition temperature**  
Annealing  
Polycarbonate, 709–713  
Dielectric relaxation  
Poly(propylene oxide), 866–870  
Electron spin resonance  
Poly(vinyl acetate), 190–194  
Fluoropolymer  
Copolymers, 905–909  
Molecular mobility  
Semicrystalline polymer, 1743–1748  
Polymerization  
Poly(dimethylsiloxane), 437–440
- Glass-fibre composite**  
Fracture toughness  
Poly(ether-ether-ketone), 1753–1760
- Growth morphology**  
Crystallization  
Polyethylene, 1585–1594
- 
- Halogen**  
Heat capacity  
Vibrational spectroscopy, 563–574
- Heat capacity**  
Polybutadiene  
Thermal behaviour, 575–582  
Vibrational spectroscopy  
Halogen, 563–574
- Humidity sensor**  
Poly(tetrafluoroethylene)  
Conductivity, 910–912
- Hydrogels**  
Brillouin scattering  
Poly(vinyl alcohol), 1864–1868  
Poly(vinyl pyrrolidone)  
Characterization, 1619–1625
- 
- Hydrostatic pressure effects**  
Thermal behaviour  
Styrene-butadiene rubber, 1943–1947
- 
- Impact energy**  
Crack propagation  
Plastic pipes, 76–79
- Infra-red spectroscopy**  
Kevlar 49  
Molecular packing, 1850–1854  
Orientation,  
Poly(phenylenevinylene), 1709–1713  
Poly(tetrafluoroethylene)  
Refractive index, 503–509
- Injection moulding**  
Orientation  
Polystyrene, 393–397
- Interpenetrating networks**  
Morphology  
Dynamic mechanical analysis,  
1807–1814
- Intrinsic viscosity**  
Gel permeation  
Polydispersity, 139–146
- Inverse gas chromatography**  
Diffusion  
Styrene, 105–108
- Ion beam**  
Diffusion  
Melt, 1063–1066
- Ion binding**  
Poly(methacrylic acid)  
Irreversibility, 409–416
- Ion exchange**  
Polypyrrole  
Conductivity, 899–904
- Irreversibility**  
Poly(methacrylic acid)  
Conformation, 417–424  
Ion binding, 409–416
- Isobutylene**  
Butylchlorideboron trichloride  
Synthesis, 1121–1127
- Isomerization**  
Networks  
Rubber elasticity, 1254–1260
- 
- Kevlar**  
Fibre failure  
Kinetics, 1895–1898
- Kevlar 49**  
Infra-red spectroscopy  
Molecular packing, 1850–1854
- Kinetics**  
Crystallization  
Polyethylene, 1679–1686  
Durham precursor route,  
Poly(ethylene), 448–454  
Emulsion polymerization  
Methyl acrylate, 147–157  
Fibre failure  
Kevlar, 1895–1898  
Polyethylene  
Alkyl groups, 281–289  
Polymerization  
Graph theory, 275–280  
Propiolactone, 71–75  
Polyurethanes  
Toluene diisocyanate, 425–430
- 
- Ladder**  
Poly(benzylene benzimidazole)  
Polymer, 1131–1134
- Latex**  
Colloidal crystal  
Suspension, 827–833  
Mechanical properties  
Copolymerization, 693–702
- Lattice-imaging**  
Electron microscopy

## Subject index

- Polydiacetylene, 202–210
- Light scattering**  
Characterization  
Gel permeation chromatography, 1170–1176  
Poly(hydroxystyrene)  
Solution properties, 1761–1767  
Poly(vinyl chloride)  
Gel, 1098–1102  
Solution properties  
Configuration, 834–838  
Stereocomplex  
Poly(methyl methacrylate), 742–746
- Liquid crystalline polymer**  
Molecular dynamics  
Dielectric relaxation, 185–189  
Optical diffraction  
Thermotropic polymer, 1325–1331
- Liquid crystals**  
Mesophase formation,  
Polymer compatibility, 118–122  
Polysiloxane  
Electric field, 811–816
- 
- Mechanical behaviour**  
Ethylene-hexene-1 copolymer  
X-ray diffraction, 363–368  
Swelling behaviour  
Polybutadiene networks, 1368–1376
- Mechanical microprocesses**  
Morphology  
Electron microscopy, 323–329
- Mechanical properties**  
Aggregation,  
Poly(diisopropyl fumarate), 1054–1057  
Copolymerization  
Latex, 693–702  
Poly(oxyethylene)  
Drawing, 1037–1043  
Polyisoprene  
Molecular weight, 1815–1818  
Rubber blends  
Nylon, 1874–1884
- Mechanical relaxation**  
Epoxy resin  
Dielectric relaxation, 1569–1573  
Poly(aryl-ether-ether-ketone)  
Electron beam, 821–826
- Melt**  
Diffusion  
Ion beam, 1063–1066  
Polystyrene,  
Nuclear magnetic resonance, 1353–1358
- Melting**  
Polyethylene  
Differential thermal analysis, 353–359  
Polypropylene  
Crystallization, 721–727
- Melting behaviour**  
Poly(aryl-ether-ether-ketone)  
Molecular analysis, 1400–1405
- Membrane**  
Osmosis  
Cellulose acetate, 937–943
- Mesophase formation**  
Liquid crystals,  
Polymer compatibility, 118–122
- Metallo-porphyrins**  
Electron transfer  
Polystyrene, 1781–1787
- Methyl acrylate**  
Emulsion polymerization  
Kinetics, 147–157
- Methyl orange**  
Gel  
Adsorption, 627–630
- Micelle**  
Small-angle neutron scattering  
Polystyrene, 931–936
- Microdispersions**  
Polymer blends  
Devolatilization, 1637–1649
- Microstructure**  
Copolymerization  
Acrylamide, 467–475  
Nuclear magnetic resonance  
Copolymers, 889–898  
Poly(vinyl alcohol), 993–998  
Polyacrylamide,  
Hydrolysis, 459–466  
Polybutadiene  
EXAFS, 979–985  
Polybutadiene networks  
Electron spectroscopy, 883–888  
Polyethylene  
Permanganic etching, 1163–1169
- Migration**  
Poly(vinyl chloride)  
Ultraviolet, 1967–1970
- Miscibility studies**  
Nuclear magnetic resonance  
Block copolymers, 80–90  
Phase separation  
Copolymer blends, 1917–1922  
Statistical analysis, 1928–1934
- Mixture**  
Glass transition  
Differential scanning calorimetry, 619–622
- Modelling**  
Copolymerization  
Diffusion, 602–610, 611–618  
Step-growth polymerization,  
Multifunctional monomer, 583–591
- Modification**  
Electroactivity  
Synthesis, 769–775  
Styrene,  
Copolymers, 631–634  
Sulphonation  
Polystyrene, 1277–1280
- Molecular analysis**  
Melting behaviour  
Poly(aryl-ether-ether-ketone), 1400–1405  
Polyethylene  
Molecular structure, 269–274
- Molecular dynamics**  
Dielectric relaxation  
Liquid crystalline polymer, 185–189
- Molecular mobility**  
Semicrystalline polymer  
Glass transition temperature, 1743–1748
- Molecular motion**  
Poly(epichlorohydrin)  
Swelling behaviour, 1067–1070
- Molecular orientation**  
Rubber elasticity  
Deformation, 1177–1182
- Molecular packing**  
Infra-red spectroscopy  
Kevlar 49, 1850–1854
- Molecular structure**  
Phase separation  
Polyisoprene, 1923–1927  
Polyethylene  
Molecular analysis, 269–274
- Molecular weight**  
Branching  
Epoxy resins, 728–734  
Emulsion polymerization  
Reaction rate, 265–268  
Glass transition  
Blend, 747–749  
Mechanical properties  
Polyisoprene, 1815–1818  
Polycarbonate  
Chromatography, 1410–1415  
Small-angle scattering
- Polyelectrolytes, 925–930
- Molecular weight distribution**  
Polymerization  
Continuous flow reactor, 1261–1268
- Monomer structure**  
Fluoropolymer  
Polymerization, 1289–1295
- Monte-Carlo calculation**  
Flexibility  
Random walk, 1087–1090
- Monte-Carlo simulation**  
Poly(tetrafluoroethylene)  
X-ray diffraction, 986–992  
Relaxation  
Dynamic properties, 1777–1780
- Mooney-Rivlin equation**  
Rheological behaviour  
Polystyrene melts, 61–65
- Morphology**  
Crystal habit,  
Poly(butylene terephthalate), 66–70  
Crystallization  
Poly(aryl-ether-ether-ketone), 329–336  
Electron microscopy  
Mechanical microprocesses, 323–329  
Fracture energy,  
Poly(1,4-dimethylene suberate), 1725–1733  
Interpenetrating networks  
Dynamic mechanical analysis, 1807–1814  
Nuclear magnetic resonance  
Cellulose acetate, 19–24  
Poly(ethylene terephthalate)  
Chemical degradation, 233–240  
Polyacetylene  
Polymerization, 2003–2008  
X-ray scattering, 1719–1724  
Polyethylene  
Crosslinking, 1696–1704  
Crystallization, 1687–1695  
Polypropylene, 1497–1504  
Small-angle X-ray scattering, 1147–1153  
Polyoxymethylene  
Crystal modulus, 1651–1657  
Spherulite  
Crystallization, 1463–1471, 1472–1476  
Swelling behaviour  
Polystyrene, 377–383  
X-ray diffraction  
Blend, 1007–1013
- 
- Nematic structure**  
Defects  
Polyester, 714–720
- Network**  
Disintegration  
Electron beam, 681–685  
FT infra-red spectroscopy  
Polyurethane, 592–596  
Gelatin  
Nuclear magnetic resonance, 1103–1110  
Neutron scattering  
Epoxy resins, 169–180  
Rubber elasticity  
Strain, 1044–1049  
Rubber vulcanizate,  
Freezing point depression, 398–402  
Statistical analysis  
Structure, 913–920
- Networks**  
Poly(dimethylsiloxane)  
Polystyrene, 1315–1324  
Rubber elasticity  
Isomerization, 1254–1260  
Rubber vulcanizate  
Poly(dimethylsiloxane), 1563–1568
- Neutron scattering**  
Network  
Epoxy resins, 169–180

- Polystyrene,  
  Screening length, 1595–1600  
Rubber  
  Entanglements, 1154–1162
- Nuclear magnetic resonance**  
Cellulose acetate  
  Morphology, 19–24  
Characterization,  
  Siloxane-silica networks, 1855–1863  
Complexation  
  Polyamides, 133–138  
Conformation  
  Cellulose nitrate, 765–768  
Epoxy resin  
  Proton spectrum, 1493–1496  
Fluoropolymer  
  Polymerization, 1296–1303  
Formaldehyde  
  Resin, 757–764  
Gelatin  
  Network, 1103–1110  
Microstructure  
  Copolymers, 889–898  
  Poly(vinyl alcohol), 993–998  
Miscibility studies  
  Block copolymers, 80–90  
Polyethylene  
  Dynamics, 1658–1664  
Polystyrene  
  Self-diffusion, 1091–1097  
Resin  
  Formaldehyde, 750–756
- Nucleating agent**  
  Crystallization  
    Poly(ethylene terephthalate), 109–117
- Nucleation**  
  Crystallization  
    Polycaprolactone, 1912–1916
- Nylon**  
  Crystallization  
    Supercooling, 1542–1546  
  Drawing  
    Plasticization, 241–246  
  Rubber blends  
    Mechanical properties, 1874–1884
- Nylon gel**  
  Extrusion  
    Annealing, 1022–1029
- Nylon salt**  
  Polyamidation  
    Catalyst, 1437–1440
- 
- Optical diffraction**  
  Liquid crystalline polymer  
    Thermotropic polymer, 1325–1331
- Orientation**  
  Adhesion  
    Polypropylene laminates, 1219–1227  
  Crystallization  
    Stress, 856–860  
  Infra-red spectroscopy,  
    Poly(phenylenevinylene), 1709–1713  
  Polyacetylene  
    Durham precursor route, 1714–1718  
  Polystyrene  
    Injection moulding, 393–397
- Oriented polymer**  
  Crystallization  
    Polyethylene, 817–820  
  Shrinkage  
    Thermal behaviour, 871–876
- Osmosis**  
  Membrane  
    Cellulose acetate, 937–943
- Osmotic pressure**  
  Virial coefficient  
    Perturbation theory, 1359–1367
- Oxidation**  
  Diffusion  
    Density profiling, 225–232
- 
- PEBAX [Poly(ether block amide)]**  
  Thermally stimulated discharge current  
    Relaxation, 527–531
- Packing**  
  Polymorphism  
    Polypeptide, 849–855
- Paint**  
  Raman spectroscopy  
    Weathering, 217–224
- Paraffins**  
  Crystallization  
    Small-angle X-ray scattering, 1835–1844
- Permanganic etching**  
  Poly(aryl-ether-ether-ketone),  
    Spherulites, 344–348  
  Polyethylene  
    Microstructure, 1163–1169
- Permeation**  
  Elastomer laminate  
    Rubber, 1396–1399
- Permittivity**  
  Poly(propylene oxide)  
    Relaxation, 1907–1911
- Peroxy carbamate**  
  Block copolymers  
    Synthesis, 961–968
- Perturbation theory**  
  Virial coefficient  
    Osmotic pressure, 1359–1367
- Phase behaviour**  
  Solution properties,  
    Sulphobetaine polymers, 1734–1742
- Phase separation**  
  Aqueous polymers  
    Molecular mechanism, 1768–1770  
  Copolymer blends  
    Miscibility studies, 1917–1922  
  Molecular structure  
    Polyisoprene, 1923–1927  
  Statistical analysis  
    Miscibility studies, 1928–1934
- Photodegradation**  
  Polystyrene  
    Fluorescence spectroscopy, 1193–1200
- Photoelasticity**  
  Birefringence  
    Polyacrylamide, 1489–1492
- Plastic**  
  Deformation  
    Polypropylene, 247–249
- Plastic deformation**  
  Poly(aminobismaleimide) resin  
    Fatigue, 1749–1752
- Plastic pipes**  
  Crack propagation  
    Impact energy, 76–79
- Plasticization**  
  Drawing  
    Nylon, 241–246
- Poly(2-thiophenemethyl MA)**  
  Solution properties  
    Chain flexibility, 1416–1419
- Poly(acrylonitrile)**  
  Electrochemical properties,  
    Poly(vinylpyridine), 101–104
- Poly(amidoether)**  
  Synthesis  
    Block copolymers, 797–802
- Poly(aminobismaleimide) resin**  
  Plastic deformation  
    Fatigue, 1749–1752
- Poly(aryl-ether-ether-ketone)**  
  Crystallization  
    D.s.c., 1183–1192  
    Morphology, 329–336  
    Mechanical relaxation  
      Electron beam, 821–826  
    Melting behaviour  
      Molecular analysis, 1400–1405  
    Permanganic etching  
      Spherulites, 344–348
- Poly(benzylene benzimidazole)**  
  Ladder  
    Polymer, 1131–1134
- Poly(butylene terephthalate)**  
  Poly(ethylene terephthalate)  
    Polycondensation, 1111–1114
- Poly(dimethylsiloxane)**  
  Acrylonitrile  
    Reaction rate, 1420–1422  
  Networks  
    Rubber vulcanizate, 1563–1568  
  Polymerization  
    Glass transition temperature, 437–440  
  Polystyrene  
    Networks, 1315–1324
- Poly(dimethylsiloxanes)**  
  Thermal behaviour  
    Thermogravimetry, 91–95
- Poly(epichlorohydrin)**  
  Molecular motion  
    Swelling behaviour, 1067–1070
- Poly(ether-ether-ketone)**  
  Fibre  
    X-ray diffraction, 861–865  
  Glass-fibre composite  
    Fracture toughness, 1753–1760
- Poly(ethylene glycol)**  
  Self-diffusion  
    Enlargements, 290–292
- Poly(ethylene oxide)**  
  Dynamics  
    Water, 1951–1957
- Poly(ethylene terephthalate)**  
  Chemical degradation  
    Morphology, 233–240  
  Crystallization  
    Nucleating agent, 109–117  
  Drawing  
    Dynamic modulus, 1559–1562  
    Small-angle neutron scattering,  
      1391–1395  
  E.s.c.a.  
    Derivatization, 1058–1062  
  Poly(butylene terephthalate)  
    Polycondensation, 1111–1114  
  Polyarylate  
    Thermal transition, 2013–2018  
  Small-angle neutron scattering,  
    Ester interchange reaction, 1581–1584  
  Synthesis  
    Characterization, 955–960
- Poly(ethylene-2,6-naphthalate)**  
  Conduction  
    Crystallinity, 349–352
- Poly(hydroxystyrene)**  
  Light scattering  
    Solution properties, 1761–1767
- Poly(methacrylic acid)**  
  Irreversibility  
    Conformation, 417–424  
    Ion binding, 409–416  
  Polyelectrolytes  
    Small-angle X-ray scattering, 839–842  
  Small-angle X-ray scattering  
    Polyelectrolytes, 1241–1246  
  Viscosity  
    Solution properties, 1948–1950
- Poly(methyl methacrylate)**  
  Complexation  
    Temperature dependence, 256–260  
  Dielectric properties  
    Gamma irradiation, 1483–1488  
  Light scattering  
    Stereocomplex, 742–746  
  Poly(vinylidene fluoride)

## Subject index

- Thermally stimulated current, 1332–1336
- Poly(oxyethylene)**  
Drawing  
Mechanical properties, 1037–1043  
Dynamic modulus  
Drawing, 1030–1036
- Poly(phenyleneterephthalamide)**  
Ultimate mechanical properties,  
Stress-strain curves, 1845–1849  
Vibrational analysis  
Rigid rod polymer, 34–46
- Poly(propylene oxide)**  
Dielectric relaxation  
Glass transition temperature, 866–870  
Diffusion coefficient  
Temperature dependence, 1826–1828  
Permittivity  
Relaxation, 1907–1911  
Synthesis  
Stereoregularity, 2009–2012
- Poly(tetrafluoroethylene)**  
Humidity sensor  
Conductivity, 910–912  
Infra-red spectroscopy  
Refractive index, 503–509  
Monte-Carlo simulation  
X-ray diffraction, 986–992
- Poly(thiophene)**  
Conducting polymers  
Polypyrrole, 1533–1541
- Poly(vinyl acetate)**  
Dielectric dispersion  
Complex plane, 1509–1512  
Electron spin resonance  
Glass transition temperature, 190–194
- Poly(vinyl alcohol)**  
Brillouin scattering  
Hydrogels, 1864–1868  
Nuclear magnetic resonance  
Microstructure, 993–998
- Poly(vinyl chloride)**  
Gel  
Light scattering, 1098–1102  
Migration  
Ultraviolet, 1967–1970  
Polymerization  
Aggregation, 1609–1618  
Small-angle neutron scattering  
Structure, 1345–1348  
Styrene-butadiene rubber  
Bending behaviour, 1899–1906
- Poly(vinyl formal)**  
Thermally stimulated discharge current  
Film, 523–526
- Poly(vinyl pyrrolidone)**  
Hydrogels  
Characterization, 1619–1625
- Poly(vinylidene fluoride)**  
Thermally stimulated current  
Poly(methyl methacrylate), 1332–1336
- Polyacetylene**  
Comb-branched polymers  
Synthesis, 1128–1130  
Durham precursor route  
Orientation, 1714–1718  
Morphology  
Polymerization, 2003–2008  
X-ray scattering, 1719–1724  
Polymerization  
Conductivity, 1963–1966
- Polyacrylamide**  
Birefringence  
Photoelasticity, 1489–1492  
Microstructure,  
Hydrolysis, 459–466
- Polyamidation**  
Catalyst  
Acid catalyst, 1433–1436  
Nylon salt, 1437–1440
- Polyamide**  
Rubber  
Polymerization, 299–308
- Polyamides**  
Complexation  
Nuclear magnetic resonance, 133–138
- Polyampholytes**  
Complexation  
Catalase-like activity, 1269–1272  
Rheological properties  
Synthesis, 1453–1462
- Polyarylate**  
Dielectric relaxation  
Glass transition, 1771–1776  
Poly(ethylene terephthalate)  
Thermal transition, 2013–2018
- Polybutadiene**  
Heat capacity  
Thermal behaviour, 575–582  
Microstructure  
EXAFS, 979–985
- Polybutadiene networks**  
Mechanical behaviour  
Swelling behaviour, 1368–1376  
Microstructure  
Electron spectroscopy, 883–888
- Polybutene**  
Crystallization  
Polyethylene, 337–343
- Polycaprolactone**  
Crystallization  
Nucleation, 1912–1916
- Polycarbonate**  
Annealing  
Glass transition temperature, 709–713  
Chromatography  
Separation, 776–782  
Ductile fatigue  
Crack propagation, 1377–1384  
Molecular weight  
Chromatography, 1410–1415
- Polycarbonate blends**  
Crystallization  
Solution properties, 1788–1798  
Polyesters  
Solution properties, 1799–1806
- Polycondensation**  
Poly(ethylene terephthalate)  
Poly(butylene terephthalate), 1111–1114
- Polydiacetylene**  
Electron microscopy  
Lattice imaging, 202–210
- Polydispersity**  
Gel permeation  
Intrinsic viscosity, 139–146
- Polyelectrolytes**  
Complexes  
Charge density, 1574–1580  
Poly(methacrylic acid)  
Small-angle X-ray scattering, 839–842  
Small-angle X-ray scattering  
Poly(methacrylic acid), 1241–1246  
Small-angle scattering  
Molecular weight, 925–930
- Polyester**  
Defects  
Nematic structure, 714–720
- Polyesters**  
Polycarbonate blends  
Solution properties, 1799–1806
- Polyethylene**  
Crystal growth  
Crystal habit, 510–516  
Crystallization, 1505–1508  
Crystallization  
Growth morphology, 1585–1594  
Kinetics, 1679–1686  
Oriented polymer, 817–820  
Polybutene, 337–343  
Structure, 1669–1678
- Twin morphology, 25–33  
Drawing  
Crystallinity, 532–536  
Dynamics  
Nuclear magnetic resonance, 1658–1664  
FT nuclear magnetic resonance  
Branches, 677–680  
Fracture toughness  
Crack growth, 384–392  
Kinetics  
Alkyl groups, 281–289  
Melting  
Differential thermal analysis, 353–359  
Molecular analysis  
Molecular structure, 269–274  
Morphology  
Crosslinking, 1696–1704  
Crystallization, 1687–1695  
Polypropylene, 1497–1504  
Small-angle X-ray scattering, 1147–1153  
Permanganic etching  
Microstructure, 1163–1169  
Polypropylene  
Spherulite, 537–543  
X-ray diffraction  
Setting angle, 1349–1352
- Polyethylene sulphide**  
Electrochemical polymerization  
X-ray diffraction, 1273–1276
- Polyimide**  
Dielectric properties  
Polymerization, 11–18  
Electrical properties  
Stretching, 360–362
- Polyimide resin**  
Stress  
Work-hardening, 1050–1053
- Polyisoprene**  
Crosslinking  
Domain, 1115–1120  
FT infra-red spectroscopy  
Dichroism, 877–882  
Mechanical properties  
Molecular weight, 1815–1818  
Phase separation  
Molecular structure, 1923–1927  
Stress  
Strain, 1869–1873
- Polymer blends**  
Microdispersions  
Devolatilization, 1637–1649
- Polymer chains**  
Self-diffusion  
Rayleigh scattering, 1705–1708
- Polymerization**  
Anionic polymerization,  
Vinyl(diisopropylbenzamide), 309–312  
Dielectric properties  
Polyimide, 11–18  
Diethyl fumarate  
Diethyl cinnamate, 1819–1822  
Electron microscopy  
Polyurethane, 1423–1432  
Engineering polymers,  
Hydrophilic Modification, 1626–1632  
Fluoropolymer,  
Catalysts, 1281–1288  
Monomer structure, 1289–1295  
Nuclear magnetic resonance, 1296–1303  
Kinetics,  
Graph theory, 275–280  
Propiolactone, 71–75  
Molecular weight distribution  
Continuous flow reactor, 1261–1268  
Poly(dimethylsiloxane)  
Glass transition temperature, 437–440  
Poly(vinyl chloride)  
Aggregation, 1609–1618  
Polyacetylene  
Conductivity, 1963–1966

- Morphology, 2003–2008
- Polypyrrole**  
Conductivity, 1958–1962
- Polystyrene**  
Stilbene, 1823–1825
- Rubber**  
Polyamide, 299–308
- Spinning**  
Yarn, 1443–1452
- Temperature effects  
Diallyl benzene dicarboxylates, 403–408
- Vinyl chloride**  
Conductivity, 250–252
- Polymorphism**  
Crystal structure  
Cellulose, 597–601
- Packing**  
Polypeptide, 849–855
- Polyoxymethylene**  
Drawing  
Tensile load, 1553–1558
- Morphology**  
Crystal modulus, 1651–1657
- Polypeptide**  
Electron spectroscopy  
Block copolymers, 1513–1520
- Packing**  
Polymorphism, 849–855
- Polypropylene**  
Chain folding  
Crystallinity, 1665–1668
- Crystallization**  
Blend, 544–548
- Deformation**  
Plastic, 247–249
- Melting**  
Crystallization, 721–727
- Morphology**  
Polyethylene, 1497–1504
- Polyethylene**  
Spherulite, 537–543
- Thermal expansion**  
Shrinkage force, 1201–1210
- Polypyrrole**  
Conducting polymers  
Poly(thiophene), 1533–1541
- Conductivity**  
Ion exchange, 899–904  
Polymerization, 1958–1962
- Polysiloxane**  
Catalysis  
Conformation, 293–298
- Liquid crystals**  
Electric field, 811–816
- Polystyrene**  
**Blend**  
d.t.a., 549–562
- Crazing**  
Glycerol, 164–168
- Dynamics**  
Fluorescence anisotropy decay, 181–184
- Electron transfer**  
Metallo-porphyrins, 1781–1787
- Fluorescence spectroscopy**  
Photodegradation, 1193–1200
- Melt**  
Nuclear magnetic resonance, 1353–1358
- Micelle**  
Small-angle neutron scattering, 931–936
- Morphology**  
Swelling behaviour, 377–383
- Neutron scattering**  
Screening length, 1595–1600
- Nuclear magnetic resonance**  
Self-diffusion, 1091–1097
- Orientation**  
Injection moulding, 393–397
- Poly(dimethylsiloxane)**  
Networks, 1315–1324
- Polymerization**  
Stilbene, 1823–1825
- Rubber**  
Failure, 211–216
- Small-angle X-ray scattering**  
Thermal history, 3–10  
X-ray diffraction, 517–522
- Sulphonation**  
Modification, 1277–1280
- Viscosity**  
Solution properties, 1406–1409
- Polystyrene melts**  
Rheological behaviour  
Mooney–Rivlin equation, 61–65
- Polyurethane**  
Electron microscopy  
Small-angle X-ray scattering, 659–666
- FT infra-red spectroscopy**  
Network, 592–596
- Polymerization**  
Electron microscopy, 1423–1432
- Polyurethanes**  
Toluene diisocyanate  
Kinetics, 425–430
- Propiolactone**  
Polymerization  
Kinetics, 71–75
- Proton spectrum**  
Nuclear magnetic resonance  
Epoxy resin, 1493–1496
- Pyrene**  
Solution properties  
Complexes, 783–796
- Pyridine**  
Epoxy compounds  
Pyridone, 1134–1137
- Pyridone**  
Pyridine  
Epoxy compounds, 1134–1137
- 
- Quasi-elastic light scattering**  
Critical point  
Dynamic properties, 1071–1077
- 
- Raman spectroscopy**  
Weathering  
Paint, 217–224
- Random Phase Approximation**  
Dynamic scattering function  
Rouse dynamics, 1935–1942
- Random walk**  
Monte-Carlo calculation  
Flexibility, 1087–1090
- Rayleigh scattering**  
Self-diffusion  
Polymer chains, 1705–1708
- Structural relaxation**  
Brillouin scattering, 261–264
- Reaction rate**  
Emulsion polymerization  
Molecular weight, 265–268
- Poly(dimethylsiloxane)**  
Acrylonitrile, 1420–1422
- Refractive index**  
Infra-red spectroscopy  
Poly(tetrafluoroethylene), 503–509
- Relaxation**  
Depolarization  
Activation energy, 1014–1021
- Monte-Carlo simulation**  
Dynamic properties, 1777–1780
- Poly(propylene oxide)**  
Permittivity, 1907–1911
- Thermally stimulated discharge current**  
PEBAX [Poly(ether block amide)],  
527–531
- Resin**  
Nuclear magnetic resonance  
Formaldehyde, 750–756, 757–764
- Rheological behaviour**  
Polystyrene melts  
Mooney–Rivlin equation, 61–65
- Rheological properties**  
Polyampholytes  
Synthesis, 1453–1462
- Rigid rod polymer**  
Crystallization  
Thermotropic behaviour, 1337–1344
- Vibrational analysis**  
Poly(phenyleneterephthalamide), 34–46
- Rod-like polymer**  
Elongational flow  
Birefringence, 493–502
- Rouse dynamics**  
Dynamic scattering function  
Random Phase Approximation,  
1935–1942
- Rubber**  
Crystallization  
Gel, 1889–1894
- Strain**, 1211–1218
- Neutron scattering**  
Entanglements, 1154–1162
- Permeation**  
Elastomer laminate, 1396–1399
- Polyamide**  
Polymerization, 299–308
- Polystyrene**  
Failure, 211–216
- Thermoviscoelasticity**  
Temperature induced creep, 47–60
- Rubber blends**  
Mechanical properties  
Nylon, 1874–1884
- Rubber elasticity**  
Entanglements  
Deformation, 483–492
- Molecular orientation**  
Deformation, 1177–1182
- Network**  
Strain, 1044–1049
- Networks**  
Isomerization, 1254–1260
- Rubber vulcanizate**  
Network  
Freezing point depression, 398–402
- Networks**  
Poly(dimethylsiloxane), 1563–1568
- 
- Saponification**  
Copolymerization  
Vinyl copolymers, 123–128
- Gel collapse**  
Swelling behaviour, 313–318
- Second virial coefficient**  
Solvation  
Cosolvent mixtures, 1247–1253
- Self-diffusion**  
Poly(ethylene glycol)  
Entanglements, 290–292
- Polymer chains**  
Rayleigh scattering, 1705–1708
- Polystyrene**  
Nuclear magnetic resonance, 1091–1097
- Semicrystalline polymer**  
Molecular mobility  
Glass transition temperature, 1743–1748
- Separation**  
Polycarbonate  
Chromatography, 776–782
- Setting angle**  
X-ray diffraction  
Polyethylene, 1349–1352
- Shear**  
Ageing  
Glass, 686–692
- Shrinkage**  
Oriented polymer  
Thermal behaviour, 871–876
- Shrinkage force**  
Polypropylene

## Subject index

- Thermal expansion, 1201–1210
- Silica**  
Siloxane  
Adsorption, 843–848
- Siloxane**  
Silica  
Adsorption, 843–848
- Small-angle X-ray scattering**  
Crystallization  
Chain conformation, 651–658  
Paraffins, 1835–1844  
Electron microscopy  
Polyurethane, 659–666  
Morphology  
Polyethylene, 1147–1153  
Poly(methacrylic acid)  
Polyelectrolytes, 1241–1246  
Polyelectrolytes  
Poly(methacrylic acid), 839–842  
Polystyrene  
Thermal history, 3–10  
X-ray diffraction, 517–522
- Small-angle neutron scattering**  
Copolymer  
Conformation, 643–650  
Micelle  
Polystyrene, 931–936  
Poly(ethylene terephthalate)  
Drawing, 1391–1395  
Ester interchange reaction, 1581–1584  
Poly(vinyl chloride)  
Structure, 1345–1348
- Small-angle scattering**  
Polyelectrolytes  
Molecular weight, 925–930
- Solution properties**  
Acrylamide copolymers  
Polycation, 1976–1980  
Chain flexibility  
Poly(*p*-tert-butylstyrene), 129–132  
Light scattering  
Configuration, 834–838  
Poly(hydroxystyrene), 1761–1767  
Phase behaviour  
Sulphobetaine polymers, 1734–1742  
Poly(2-thiophenemethyl MA)  
Chain flexibility, 1416–1419  
Polycarbonate blends  
Crystallization, 1788–1798  
Polyesters, 1799–1806  
Polystyrene  
Viscosity, 1406–1409  
Pyrene  
Complexes, 783–796  
Star polymer  
Temperature dependence, 1078–1086  
Viscosity  
Poly(methacrylic acid), 1948–1950
- Solvation**  
Second virial coefficient  
Cosolvent mixtures, 1247–1253
- Spectroscopic analysis**  
Composites  
Stress distribution, 1547–1552
- Spherulite**  
Morphology  
Crystallization, 1463–1471, 1472–1476  
Polypropylene  
Polyethylene, 537–543
- Spinning**  
Yarn  
Polymerization, 1443–1452
- Star polymer**  
Solution properties  
Temperature dependence, 1078–1086
- Statistical analysis**  
Network  
Structure, 913–920  
Phase separation  
Miscibility studies, 1928–1934
- Step-growth polymerization**  
Modelling  
Multifunctional monomer, 583–591
- Stereocomplex**  
Light scattering  
Poly(methyl methacrylate), 742–746
- Stereoregularity**  
Poly(propylene oxide)  
Synthesis, 2009–2012
- Stilbene**  
Polymerization  
Polystyrene, 1823–1825
- Strain**  
Crystallization  
Rubber, 1211–1218  
Rubber elasticity  
Network, 1044–1049  
Stress  
Polyisoprene, 1869–1873
- Stress**  
Crystallization  
Orientation, 856–860  
Strain  
Polyisoprene, 1869–1873  
Thermal degradation  
Chain flexibility, 253–255  
Work-hardening  
Polyimide resin, 1050–1053
- Stress distribution**  
Composites  
Spectroscopic analysis, 1547–1552
- Stretching**  
Electrical properties  
Polyimide, 360–362
- Structural relaxation**  
Rayleigh scattering  
Brillouin scattering, 261–264
- Structure**  
Copolymerization  
Acrylamide copolymers, 1971–1975  
Crystallization  
Polyethylene, 1669–1678  
Small-angle neutron scattering  
Poly(vinyl chloride), 1345–1348  
Statistical analysis  
Network, 913–920  
Thermotropic polyesters  
Thermal transition, 441–447
- Styrene**  
Electrochemical polymerization  
Cathodic reduction, 1304–1306  
Inverse gas chromatography  
Diffusion, 105–108  
Modification  
Copolymers, 631–634
- Styrene-butadiene rubber**  
Poly(vinyl chloride)  
Bending behaviour, 1899–1906  
Thermal behaviour  
Hydrostatic pressure effects, 1943–1947
- Sulphonation**  
Polystyrene  
Modification, 1277–1280
- Supercooling**  
Crystallization  
Nylon, 1542–1546
- Surface reaction**  
Electron spin resonance  
Ultraviolet, 949–954
- Suspension**  
Colloidal crystal  
Latex, 827–833
- Swelling behaviour**  
Mechanical behaviour  
Polybutadiene networks, 1368–1376  
Molecular motion  
Poly(epichlorohydrin), 1067–1070  
Morphology  
Polystyrene, 377–383  
Saponification
- Gel collapse, 313–318
- Synthesis**  
Alcohol-ether conversion  
Cycloheptane, 1441–1442  
Block copolymers  
Peroxydicarbonate, 961–968  
Poly(amidoether), 797–802  
Characterization  
Poly(ethylene terephthalate), 955–960  
Dipyridylamine  
Transition metal complexes, 1641–1643  
Electroactivity  
Modification, 769–775  
Electrochemical polymerization  
Poly(di-(thienyl-pyrrole)), 455–458  
Isobutylene  
Butylchlorideboron trichloride,  
1121–1127  
Poly(propylene oxide)  
Stereoregularity, 2009–2012  
Polyacetylene  
Comb-branched polymers, 1128–1130  
Polyampholytes  
Rheological properties, 1453–1462
- 
- Temperature dependence**  
Complexation  
Poly(methyl methacrylate), 256–260  
Diffusion coefficient  
Poly(propylene oxide), 1826–1828  
Star polymer  
Solution properties, 1078–1086
- Temperature effects**  
Diallyl benzene dicarboxylates  
Polymerization, 403–408
- Temperature induced creep**  
Thermoviscoelasticity  
Rubber, 47–60
- Tensile load**  
Drawing  
Polyoxymethylene, 1553–1558
- Tensile strain**  
Ethylene  
Crystallinity, 703–708
- Thermal behaviour**  
Heat capacity  
Polybutadiene, 575–582  
Poly(dimethylsiloxanes)  
Thermogravimetry, 91–95  
Shrinkage  
Oriented polymer, 871–876  
Styrene-butadiene rubber  
Hydrostatic pressure effects, 1943–1947
- Thermal degradation**  
Stress  
Chain flexibility, 253–255  
Urethane copolymers  
Gel permeation chromatography,  
1235–1240
- Thermal expansion**  
Polypropylene  
Shrinkage force, 1201–1210
- Thermal history**  
Small-angle X-ray scattering  
Polystyrene, 3–10
- Thermal transition**  
Poly(ethylene terephthalate)  
Polyarylate, 2013–2018  
Thermotropic polyesters  
Structure, 441–447
- Thermally stimulated current**  
Poly(vinylidene fluoride)  
Poly(methyl methacrylate), 1332–1336
- Thermally stimulated discharge current**  
Poly(vinyl formal)  
Film, 523–526  
Relaxation  
PEBAX [Poly(ether block amide)],  
527–531

- Thermodynamics**  
Gibbs-DiMarzio theory  
Glass transition, 921-924
- Thermogravimetric analysis**  
Decomposition  
Bornyl acrylate monomer, 1999-2002
- Thermogravimetry**  
Poly(dimethylsiloxanes)  
Thermal behaviour, 91-95
- Thermotropic behaviour**  
Crystallization  
Rigid rod polymer, 1337-1344
- Thermotropic polyesters**  
Structure  
Thermal transition, 441-447
- Thermotropic polymer**  
Optical diffraction  
Liquid crystalline polymer, 1325-1331
- Thermoviscoelasticity**  
Rubber  
Temperature induced creep, 47-60
- Toluene diisocyanate**  
Polyurethanes  
Kinetics, 425-430
- Transition metal complexes**  
Dipyridylamine  
Synthesis, 1641-1643
- Transition phenomena**  
Ethylene-tetrafluoroethylene  
Copolymer, 1521-1528
- Twin morphology**  
Crystallization  
Polyethylene, 25-33
- 
- Ultrasound**  
Copolymerization
- Electroinitiation, 803-806
- Ultraviolet**  
Electron spin resonance  
Surface reaction, 949-954  
Poly(vinyl chloride)  
Migration, 1967-1970
- Urethane copolymers**  
Thermal degradation  
Gel permeation chromatography, 1235-1240
- 
- Vibrational analysis**  
Poly(phenyleneterephthalamide)  
Rigid rod polymer, 34-46
- Vibrational spectroscopy**  
Heat capacity  
Halogen, 563-574
- Vinyl chloride**  
Polymerization  
Conductivity, 250-252
- Vinyl-2-pyrrolidone**  
Copolymerization  
Carboxyphenyl acrylate, 96-100
- Vinylidene fluoride**  
Ferroelectric polarization  
Copolymer, 667-676
- Virial coefficient**  
Perturbation theory  
Osmotic pressure, 1359-1367
- Viscosity**  
Poly(methacrylic acid)  
Solution properties, 1948-1950  
Polystyrene  
Solution properties, 1408-1409
- 
- Water**
- Acrylamide  
Copolymer, 623-626  
Poly(ethylene oxide)  
Dynamics, 1951-1957
- Weathering**  
Raman spectroscopy  
Paint, 217-224
- Wide-angle X-ray scattering**  
Cellulose  
Composition, 944-948
- Work-hardening**  
Stress  
Polyimide resin, 1050-1053
- 
- X-ray diffraction**  
Blend  
Morphology, 1007-1013  
Crystal structure  
Ethylene-tetrafluoroethylene, 999-1006  
Electrochemical polymerization  
Polyethylene sulphide, 1273-1276  
Mechanical behaviour  
Ethylene-hexene-1 copolymer, 363-368  
Monte-Carlo simulation  
Poly(tetrafluoroethylene), 986-992  
Poly(ether-ether-ketone)  
Fibre, 861-865  
Polyethylene  
Setting angle, 1349-1352  
Small-angle X-ray scattering  
Polystyrene, 517-522
- 
- Yarn**  
Spinning  
Polymerization, 1443-1452

## BOOKS FROM BUTTERWORTHS

*Tin in Organic Synthesis*

M Pereyre, J P Quintard and A Rahm  
all at Université de Bordeaux, France

- Provides an invaluable reference source for organic chemists
- Written with a mechanistic approach to the subject
- Extensively illustrated with carefully selected examples
- Large number of references

This book gives the most up-to-date synthetic organic procedures using organotin compounds as reagents or intermediates. The mechanistic approach is never neglected, allowing the reader to choose the most appropriate pathways and experimental conditions. Organic chemists will find this book a valuable source for all the possible uses of organotin compounds.

November 1986 304pp approx 234 x 156mm Hardcover Illustrated 0 408 01435 0 £50.00 approx

For details of other Butterworth Scientific titles, please contact the appropriate office.

Orders should be sent to the appropriate office listed below.

The UK headquarters serves all UK and overseas markets except where there is a local Butterworths office.

**United Kingdom**

Butterworths, Borough Green  
Sevenoaks, Kent TN15 8PH  
England

**Australia & Papua New Guinea**

Butterworths Pty Ltd, PO Box 345  
North Ryde, New South Wales 2113  
Australia

**Customers in Asia may order through:**

Butterworth & Co (Asia) Pty Ltd  
PO Box 770, Crawford Post Office  
Singapore 9119, Republic of Singapore

**New Zealand**

Butterworths of New Zealand Ltd  
33-35 Cumberland Place  
Wellington 1, New Zealand

**South Africa**

Butterworth & Co (South Africa)  
(Pty) Ltd Box No 792  
Durban 4000, South Africa

**USA & Canada**

Butterworth Publishers  
80 Montvale Avenue  
Stoneham, MA 02180, USA