

Bibliography

- [1] A.S. Edelstein (ed), IOP publishing, Bristol, (1999)
- [2] Z.Y. Zhang, M.G. Lagally, Science, 377, 276 (1997)
- [3] J.R. Weertman, R.S. Averback, A.S. Edelstein and R.C. Cammarata (eds), IOP publishing, London, 323 (1996)
- [4] K.P. Jayadevan, T.Y. Tseng and H.S. Nalwa (ed), American Scientific, California, 8 (2004)
- [5] Carl C. Koch (ed), William Andrew Inc., USA, (2007)
- [6] S. Decker and K.J. Klabunde, J. Am. Chem. Soc., 118, 12465 (1996)
- [7] R.W. Siegel, Mater. Sci. Eng. A, 168, 189 (1993)
- [8] M.Y. Lin, H.M. Lindsay, D.A. Weitz, R.C. Ball, R. Klein and P. Meakin, Proc. Roy. Soc. London, Ser. A., 71, 423 (1989)
- [9] B.B. Mandelbrot, The Fractal Geometry of Nature, Freeman, San Francisco, (1983)
- [10] J.K. Kjems, A. Bunde and S. Havlin (eds), Springer- Verlag, New York, (1996)

- [11] L.W. Miller, M.I. Tejedor, B.P. Nelson and M.A. Anderson, *J. Phys. Chem. B*, 103, 8490 (1999)
- [12] P. Yang, D. Zhao, D.I. Margolese, B.F. Chmelka and G.D. Stucky, *Chem. Mater.*, 11, 2813 (1999)
- [13] D.N. Srivastava, N. Perkas, A. Gedanken and I. Felner, *J. Phys. Chem. B*, 106, 1878 (2002)
- [14] A.R. West, *Solid State Chemistry and Its Applications*, John Wiley & Sons, New York, (1984)
- [15] A.Z. Zakhidov, R.H. Boughman, Z. Iqbal, C. Cui, I. Khayrullin, S.O. Dantas, J. Marti and V.G. Ralchenko, *Science*, 282, 897 (1998)
- [16] J.E.G.J. Wijnhoven and W. Vos, *Science*, 281, 802 (1998)
- [17] B.T. Holland, C.F. Blanford and A. Stein, *Science*, 281, 538 (1998)
- [18] L. Smart, E. Moore, *Solid State Chemistry; an Introduction* (2nd edn.), Nelson Thornes, U.K., (2004)
- [19] A. Dyer, *An Introduction to Zeolite Molecular Sieves*, John Wiley, New York, (1988)
- [20] W.D. Luedike and U. Landman, *Adv. Mater.*, 8, 428 (1996)
- [21] I.S. Yin, Z.L. Wang, *Phys. Rev. Lett.*, 79, 2570 (1997)
- [22] S. Sun, C.B. Murray, *J. Appl. Phys.*, 85, 4325 (1999)
- [23] Z.L. Wang, *Adv. Mater.*, 10, 13 (1998)

- [24] S.A. Harlenist, Z.L. Wang, M.M. Alvarez, I. Vezmar and R.L. Whetten, *J. Phys. Chem.*, 100, 13904 (1996)
- [25] J.W. McBain and C.S. Salmon, *J. Am. Chem. Soc.*, 43, 426 (1920)
- [26] H. Gutmann and A.S. Kertes, *J. Colloid Interface Sci.*, 51, 406 (1973)
- [27] M.P. Pileni and I. Lisiecki, *J. Am. Chem. Soc.*, 115, 3887 (1993)
- [28] Z.J. Chen, X.M. Qu, F.Q. Fang and L. Jiang, *Colloids Surf. B*, 7, 173 (1996)
- [29] J.C. Love, L.A. Estroff, J.K. Kriebel, R.G. Nuzzo and G.M. Whitesides, *Chem. Rev.*, 105, 1103 (2005)
- [30] D.V. Talapin, R. Koeppe, S. Goetzinger, A. Kornowski, M. Haase and H. Weller, *Nano Lett.*, 1, 207 (2001)
- [31] I. Mekis, D.V. Talapin, A. Kornowski, M. Haase and H. Weller, *J. Phys. Chem. B*, 107, 7454 (2003)
- [32] X. Chen, Y. Lou and C. Burda, *Ind. J. Nanotech.*, 1, 105 (2004)
- [33] H. Zeng, J. Li, Z.L. Wang, J.P. Liu and S. Sun, *Nano Lett.*, 4(1), 187 (2004)
- [34] S. Kim, B. Fisher, H. Eisler and M. Bawandi, *J. Am. Chem. Soc.*, 125, 11466 (2003)
- [35] M. Sarikaya, *Proc. Nat. Acad. Sci., USA*, 96, 14183 (1999)
- [36] R.B. Frankel and D.A. Bazilinski, *Hyperfine interact.*, 90, 135 (1994)

- [37] R. Rawls, Chemical & Engineering News, 59, 42 (1981)
- [38] W. Thiel, American Chemical Society. 677, 142 (1998)
- [39] J. B. Evert, V. G. Oleg and R. V. Leeuwen, American Chemical Society, Chapter 2, pp 20-41 (1996)
- [40] R. J. Cava, J. Am. Ceram. Soc., 5, 83, (2000)
- [41] J. Z. Sun and A. Gupta, Annu. Rev. Mater. Sci. 28,
- [42] A. I. Kingon, J.P. Maria and S. K. Streiffer, Nature. 406, 1032 (2000)
- [43] J. F. Scott, Annu. Rev. Mater. Sci. 28, 79 (1998)
- [44] O. Auciello, J. F. Scott and R. Ramesh, Physics Today. July, 22 (1998)
- [45] D. Dimos and C. H. Mueller, Annu. Rev. Mater. Sci. 28, 397 (1998)
- [46] B. C. H. Steele and A. K. Heinzel, Nature. 414, 345 (2001)
- [47] J-M. Tarascon and M. Armand, Nature. 414, 359 (2001)
- [48] D.H. Cho, W.J. Lee, S.W. Park, J.H. Wi, W.S. Han, J. Kim, M.H. Cho, D. Kim and Y.D. Chung, J. Mater. Chem. 2, 14593-14599 (2014)
- [49] D. Aldakov, A. Lefrancois and P. Reiss, J. Mater. Chem. C, 1, 3756-3776 (2013)
- [50] J. Zhu and M. Zach, Curr. Opin. Colloid Interface Sci. 14, 260-269 (2009)
- [51] M. Ni, M.K.H. Leung, D.Y.C. Leung and K. Sumathy, Rev., 11, 401-425 (2007)

- [52] A. Kudo, Int. J. Hydrogen Energy 32 , 2673-2678 (2007)
- [53] J. L. Ellison, J. M. Gibson and L. E. Brus, J. Chem. Phys. 80, 4403 (1984)
- [54] A. N. Goldstein, C. M. Echer and A. P. Alivisatos, Science. 356, 1425 (1992)
- [55] S. B. Qadri, E. F. Skelton, D .Hsu, A. D. Dinsmore, J. Yang, H. F. Gray and B. R. Ratna, Phys. Rev. B. 60, 9191 (1999)
- [56] C. C. Chen, A. B. Herhold, C. S. Johnson and A. P. Alivisatos, Science. 398, 276 (1997)
- [57] J. Eastoe and B. Warne, Curr. Opin. Colloid Interface Sci. 1, 800 (1996)
- [58] S. D. Desai, R. D. Gordon, A. M. Groda and E. L. Cussler, Curr. Opin. Colloid Interface Sci. 1, 519 (1996)
- [59] J. H. Fendler, Curr. Opin. Colloid Interface Sci. 2, 365 (1997)
- [60] W. F. C. Sager, Curr. Opin. Colloid Interface Sci. 3, 276 (1998)
- [61] W. Meier, Curr. Opin. Colloid Interface Sci. 4, 6 (1999)
- [62] M. Antonietti, Curr. Opin. Colloid Interface Sci. 6, 244 (2001)
- [63] R. Kumar, S. Singh and B. C. Yadav, International Advanced Research Journal in Science, Engineering and Technology (IARJSET), 2, 110–124 (2015)

- [64] X. Lu, W. Zhang, C. Wang, T. C. Wen and Y. Wei, *Prog. Polym. Sci.*, 36, 671–712 (2010)
- [65] J. Stejskal, I. Sapurina and M. Trchová, *Prog. Polym. Sci.*, 35, 1420–1481 (2010)
- [66] T. K. Das and S. Prusty, *Polym–Plast. Technol.*, 51, 1487–1500 (2012)
- [67] Y. –Y. Noh and H. Sirringhaus, *Org. Electron.*, 10, 174–180 (2009)
- [68] M. Chipara, A. K. T. Lau, M. Aliofkhazraei, A. R. Uribe and E. Bafekr-pour, *Journal of Nanomaterials* Volume 2015, Article ID 603907, 2 pages
- [69] J. Han , D. Zhao, D. Li, X. Wang , Z. Jin and K. Zhao, *Polymers*, 10, 31 (2018)
- [70] J. Bouclé, P. Ravirajan and J. Nelson, *J. Mater. Chem.*, 17, 3141–3153 (2007)
- [71] M. C. Hamilton, S. Martin and J. Kanicki, *Ieee T. Electron. D.*, 51, 877–885 (2004)
- [72] A. N. Aleshin, *Adv. Mater.* 18, 17–27 (2006)
- [73] A. J. Heeger, S. Kivelson, J. R. Schrieffer and W. P. Su, *Rev. Mod. Phys.*, 60, 781–850 (1988)
- [74] J. H. Burroughes, D. D. C. Bradley, A. R. Brown, R. N. Marks, K. Mackay, R. H. Friend, P. L. Burns and A. B. Holmes, *Nature*, 347, 539–541 (1990)

- [75] N. S. Sariciftci, L. S. Smilowitz, A. J. Heeger and F. Wudl, *Science*, 258, 1474–1476 (1992)
- [76] H. Sirringhaus, N. Tessler and R. H. Friend, *Science*, 280, 1741–1744 (1998)
- [77] Y. Zhang, S. Liu, W. Liu, T. Liang, X. Yang, M. Xu and H. Chen, *Phys. Chem. Chem. Phys.*, 17, 27565-27572 (2015)
- [78] Y. H. Chou, H. C. Chang, C. L. Liu and W.C. Chen, *Polym. Chem.*, 6, 341–352 (2014).
- [79] H. A. Um, D. H. Lee, D. U. Heo, D. S. Yang, J. Shin, H. Baik, M. J. Cho and D. H. Choi, *ACS Nano*, 9, 5264–5274 (2015)
- [80] N. Karousis, J. Ortiz, K. Ohkubo, T. Hasobe, S. Fukuzumi, Á. S. Santos and Nikos Tagmatarchis, *J. Phys. Chem. C*, 11638, 20564-20573 (2012)
- [81] P. Das, K. Chakraborty, S. Chakrabarty, S. Ghosh and T. Pal, *ChemistrySelect*, 2(11), 3297-3305 (2017)
- [82] B. R. Rejitha and C. S. Menon, *E-Journal of Chemistry*, 9(4), 1728–1736 (2012)
- [83] A. Ogunsipe, D. Maree and T. Nyokong, *J. Mol. Struct.*, 650, 131–140 (2003)
- [84] J. He, G. Benkő, F. Korodi, T. Polívka, R. Lomoth, B. Åkermark, L. Sun, A. Hagfeldt and V. Sundström, *J. Am. Chem. Soc.*, 124, 4922–4932 (2002)

- [85] J. He, A. Hagfeldt, S. E. Lindquist, H. Grennberg, F. Korodi, L. Sun and B. Akermark, *Langmuir*, 17, 2743–2747 (2001)
- [86] A. Escosura, M. V. Martínez-Díaz, T. Torres, R. H. Grubbs, D. M. Guldi, H. Neugebauer, C. Winder, M. Drees and N. S. Sariciftci, *Chem. Asian J.*, 1–2, 148–154 (2006)
- [87] N. S. Lebedeva, E. V. Parfenyuk and E. A. Malkova, *Spect. Acta Part A*, 68, 491 (2007).
- [88] H. B. Y. Smida and B. Jamoussi, *IOSR Journal of Applied Chemistry*, 2(3), 11-17 (2012)
- [89] C. W. Xing, C. ShiLiang, L. Ü. S. Shui, Y. Y. Yuan and X. M. Hong, *Science in China Series B: Chemistry*, 50(3), 379–384 (2007)
- [90] A. L. Flores, M. A. Valenzuela, J. A. L. López , A. D. H. de la Luz, L. C. Muñoz-Arenas, M. Méndez-Hernández, and J. L. Sosa-Sánchez, *International Journal of Photoenergy*, Article ID 1604753, 9 pages (2007)
- [91] J. C. Garcia,, D. B. De lima, L. V. C. Assali and J. F. Justo, *J. Phys. Chem. C*, 115 (27), 13242–13246 (2011).
- [92] M. Ashton, J. Paul, S. B Sinnott and R. G. Hennig, *Phys. Rev. Lett.*, 118 (10), 106101 (2017)
- [93] Kaur, Harneet, *Nano Research*, 11, 343–353 (2016)
- [94] F. V. Kusmartsev, W. M. Wu and M. P. Pierpoint, *Cond-mat.mtrl-sci.*, 1-17 (2014)

- [95] M. Hu and B. Mi, Environ. Sci. Technol., 47, 3715–3723 (2013)
- [96] D. A. Dikin, S. Stankovich, E. J. Zimney, R. D. Piner, G. H. B. Dommett, G. Evmenenko, S. B. T. Nguyen and R. S. Ruoff, Nature, 448, 457–460 (2007)
- [97] N K. Novoselov, D. Jiang, F. Schedin, T. Booth, V. V. Khotkevich, S. V. Morozov and A. K. Geim, Proc. Natl. Acad. Sci. U. S. A., 102, 10451 (2005)
- [98] D. Jariwala, V. K. Sangwan, L. J. Lauhon, T. J. Mark and M. C. Hersam, ACS Nano, 8, 1102 (2014)
- [99] R. Mas-Balleste, C. Gomez-Navarro, J. Gomez-Herrero and F. Zamora, Nanoscale, 3, 20 (2011)
- [100] Q. H. Wang, K. Kalantar-Zadeh, A. Kis, J. N. Coleman and M. S. Strano, Nat. Nanotechnol., 7, 699 (2012)
- [101] S. Lei, F. Wen, B. Li, Q. Wang, Y. Huang, Y. Gong, Y. He, P. Dong, J. Bellah, A. George, J. Lou, N. J. Halas, R. Vajtai and P. M. Ajayan, Nano Lett., 15, 259 (2015)
- [102] W. Park, J. Baik, T.-Y. Kim, K. Cho, W.-K. Hong, H. J. Shin and T. Lee, ACS Nano, 8, 4961 (2013)
- [103] J. Pak, J. Jang, K. Cho, T. Y. Kim, J. K. Kim, Y. Song, W. K. Hong, M. Min, H. Lee and T. Lee, Nanoscale, 7, 18780 (2015)
- [104] F. Prins, A. J. Goodman and W. A. Tisdale, Nano Lett., 14(11), 6087–6091 (2014)

- [105] M. Mandal, D. Ghosh, S. S. Kalra and C. K. Das, International Journal of Latest Research in Science and Technology, 3(3), 65-69 (2014)
- [106] B. Radisavljevic, A. Radenovic, J. Brivio, V. Giacometti and A. Kis, Nat.Nanotechnol., 6(3), 147-150 (2011)
- [107] H. Liu, A. T. Neal and P. D. Ye, ACS Nano, 6, 8563 (2012)
- [108] S. Kim, A. Konar, W. S. Hwang, J. H. Lee, J. Lee, J. Yang, C. Jung, H. Kim, J.-B. Yoo, J.-Y. Choi, Y. W. Jin, S. Y. Lee, D. Jena, W. Choi and K. Kim, Nat. Commun., 3, 1011 (2012)
- [109] W. Zhou , Z. Yin , Y. Du , X. Huang , Z. Zeng, Z. Fan, H. Liu , J. Wang and H. Zhang, Small, 9, 140-147 (2013)
- [110] X. Huang, Z. Zeng and H. Zhang, Chemical Society Reviews, 42, 1934-1946 (2013)
- [111] G. Ma, H. Peng, J. Mu, H. Huang, X. Zhou and Z. Lei, Journal of Power Sources, 229, 72-78 (2013)
- [112] K. Chang and W. Chen, Chemical Communications, 47, 4252-4254 (2011)
- [113] A. M. Goldberg, A. R. Beal, F. A. Levy and E. A. Davis, Philos. Mag., 32, 367 (1975)
- [114] K. F. Mak, C. Lee, J. Hone, J. Shan and T. F. Heinz, Phys. Rev. Lett., 105, 136805 (2010)

- [115] A. Splendiani, L. Sun, Y. Zhang, T. Li, J. Kim, C. Y. Chim, G. Galli and F. Wang, *Nano Lett.*, 10, 1271 (2010)
- [116] S. Chuang, C. Battaglia, A. Azcatl, S. McDonnell, J. S. Kang, X. Yin, M. Tosun, R. Kapadia, H. Fang, R. M. Wallace and A. Javey, *Nano Lett.*, 14, 1337 (2014)
- [117] Y. Zhang, J. Ye, Y. Matsuhashi and Y. Iwasa, *Nano Lett.*, 12, 1136 (2012)
- [118] K. Cho, W. Park, J. Park, H. Jeong, J. Jang, T. Y. Kim, W. K. Hong, S. Hong and T. Lee, *ACS Nano*, 7, 7751 (2013)
- [119] H. Li, Z. Yin, Q. He, H. Li, X. Huang, G. Lu, D. W. H. Fam, A. I. Y. Tok, Q. Zhang and H. Zhang, *Small*, 8, 63 (2012)
- [120] C. Reyes, J. Fernandez, J. Freer, M. A. Mondaca, C. Zaror, S. Malato and H. D. Mansilla, *J. Photochem. Photobiol. A*, 184, 141–146 (2006)
- [121] Z. Xiong, L. L. Zhang, J. Ma and X. S. Zhao, *Chem. Commun.*, 46, 6099–6101 (2010)
- [122] K. Krishnamoorthy, R. Mohan and S. J. Kim, *Appl. Phys. Lett.*, 98, 244101 (2011)
- [123] J. Zhang, Z. Xiong and X. S. Zhao, *J. Mater. Chem.*, 21, 3634 (2011)
- [124] P. Wang, P. S. Yap and T. T. Lim, *Appl. Catal. A Gen.* 399, 252–261 (2011)

- [125] P. Chen, T. Xiao, H. Li, J. Yang, Z. Wang, H. Yao and S. Yu, *acsnano.*, 6, 712-719 (2012)
- [126] J. Wang, T. Tsuzuki, B. Tang, X. Hou, L. Sun and X. Wang, *ACS Appl. Mater. Inter.*, 4, 3084–3090 (2012)
- [127] M. S. A. S. Shah, A. R. Park, K. Zhang, J. H. Park and P. J. Yoo, *ACS Appl. Mater. Interfaces*, 4, 3893–3901(2012)
- [128] J. Li, C. Liu and Y. Liu, *J. Mater. Chem.*, 22, 8426 (2012)
- [129] G. K. Pradhan, D. K. Padhi, and K. M. Parida, *ACS Appl. Mater. Interfaces*, 5, 9101–9110 (2013)
- [130] Q. Xiang, and J. Yu, *J. Phys. Chem. Lett.*, 4, 753–759 (2013)
- [131] I. R. Bautitz and R. F. P. Nogueira, *J. Photochem. Photobiol. A*, 187, 33–39 (2007)
- [132] S. Chakraborty, H. Kaur, T. Pal, S. Kar, S. Ghosh and S. Ghosh, *RSC Adv.*, 4, 35531-35540 (2014)
- [133] Y. Liu, *RSC Adv.*, 4, 36040–36045 (2014)
- [134] C. Ma, M. Zhou, D. Wu, M. Feng, X. Liu, P. Huo, W. Shi, Z. Ma and Y. Yan, *CrystEngComm.*, 17, 1701–1709 (2015)
- [135] J. Wen, Q. Zhang and G. Hu, *Materials Science and Engineering*, 439, 022021 (2018)
- [136] F. Wu, W. Duan, M. Li, and H. Xu, *International Journal of Photoenergy* Volume 2018, Article ID 7082785

- [137] M. A. Basith , R. Ahsan , I. Zarin and M. A. Jalil, Scientific Reports, 8, 11090 (2018)
- [138] M. Mitra, S. T. Ahamed, A. Ghosh, A. Mondal, K. Kargupta, S. Ganguly and D. Banerjee, ACS Omega 4, 1623–1635 (2019)
- [139] Q. Liu, Z. Pu, A. M. Asiri , A. H. Qusti and A. O. Al-Youbi X. Sun, J Nanopart Res ., 15, 2057 (2013)
- [140] Y. Lu, D. Wang, P. Yang, Y. Dua and C. Lu, Catal. Sci. Technol., 4, 2650 (2014)
- [141] Y. H. Tan, K. Yu, J. Z. Li, H. Fu and Z. Q. Zhu, J. Appl. Phys. 116, 064305 (2014)
- [142] Z. Cheng, B. He and L. Zhou, J. Mater. Chem. A, 3, 1042 (2015)
- [143] Y. Yuan, F. Wang, B. Hu, H. Lu, Z. Yu and Z. Zou, Dalton Trans., 44, 10997 (2015)
- [144] W. L. Ong, M. Gao and G. W. Ho, Nanoscale, 5, 11283 (2013)
- [145] B. Zhu, B. Lin, Y. Zhou, P. Sun, Q. Yao, Y. Chen and B. Gao, J. Mater. Chem. A, 2, 3819 (2014)
- [146] A. K. Geim and K. S. Novoselov, Nat. Mater. 6, 183 (2007)
- [147] Y. Zhang, Y. -W. Tan, H. L. Stormer and P. Kim, Nature, 438, 201–204 (2005)

- [148] K. S. Novoselov, A. K. Geim, S. V. Morozov, D. Jiang, Y. Zhang, S. V. Dubonos, I. V. Grigorieva and A. A. Firsov, *Science*, 306, 666–669 (2004)
- [149] C. Berger, Z. Song, T. Li, X. Li, A. Y. Ogbazghi, R. Feng, Z. Dai, A. N. Marchenkov, E. H. Conrad, P. N. First and W. A. de Heer, *J. Phys. Chem. B*, 108, 19912–19916 (2004)
- [150] E. J. H. Lee, K. Balasubramanian, R. T. Weitz, M. Burghard and K. Kern, *Nat. Nanotechnol.* 3, 486–490 (2008)
- [151] J. Park, Y. H. Ahn and C. Ruiz-Vargas, *Nano Lett.* 9, 1742–1746 (2009)
- [152] F. Xia, T. Mueller, Y. M. Lin, A. Valdes Garcia and P. Avouris, *Nat.Nanotechnol.* 4, 839–843 (2009)
- [153] K. Chakraborty, S. Chakrabarty, P. Das, S. Ghosh and T. Pal, *Mater. Sci. Eng. B*, 204, 8–14 (2016)
- [154] H. Chang, Z. Sun, K. Y.F. Ho, X. Tao, F. Yan, W. M Kwok and Z. Zheng, *Nanoscale*, 3, 258 (2011)
- [155] G. Eda and M. Chhowalla, *Adv. Mater.*, 22, 2392–2415 (2010)
- [156] F. Bonaccorso, Z. Sun, T. Hasan and A. C. Ferrari, *Nature Photonics*, 4, 611-622 (2010)
- [157] A. Cao, Z. Liu, S. Chu, M. Wu, Z. Ye, Z. Cai, Y. Chang, S. Wang, Q. Gong and Y. Liu, *Adv. Mater.*, 22, 103–106 (2010)

- [158] L. Huang, Y. Huang, J. Liang, X. Wan and Y. Chen, Nano Res., 4(7), 675–684 (2011)
- [159] G. Konstantatos, M. Badioli, L. Gaudreau, J. Osmond, M. Bernechea, F. P. G. Arquer, F. Gatti and F. H. L. Koppen, Nnano , 60 (2012)
- [160] J. Liu , Y. Xue , M. Zhang and Liming Dai, Mrs Bulletin, 37, 1265-1272 (2012)
- [161] N. Kurra, V. Bhadram, C. Narayana and G.U. Kulkarni, Nanotechnology, 23, 425301 (2012)
- [162] X. Luana, L. Chenb, J. Zhangb, G. Quc, J. C. Flakec and Y. Wanga, Electrochimica Acta, 111, 216– 222 (2013)
- [163] P. S. Khare, R. Yadav and A. Swarup, International Journal of Applied Physics and Mathematics, 3(2), 95-97 (2013)
- [164] K. Nagashio, T. Yamashita, T. Nishimura, K. Kita and A. Toriumi, Journal of Applied Physics, 110, 024513 (2011)
- [165] L. Heshmatynezhad, F.J. Sheini and A. Monshi, Mater. Res. Express 6 , 086332 (2019)
- [166] H. Ho, K. Chen, T. Nagao and C. H. Hsueh, The Journal of Physical Chemistry C., 123 (34), 21103-21113 (2019)
- [167] F. Khurshid, M. Jeyavelan, M. S. Hudson and S. Nagarajan, R. Soc. open sci., 6, 181764 (2019)

- [168] J. Dattatray,A. P. Shaikh, R. Khare, R. V. Kashid, M. Chaudhary, M. A. More and S.B. Ogale, ACS Appl. Mater. Interfaces, 6, 15881–15888 (2014)
- [169] R. Cheng, D. Li, H. Zhou, C. Wang, A. Yin, S. Jiang, Y. Liu, Y. Chen, Y. Huang and X. Duan, Nano Lett., 14(10), 5590-5597 (2014)
- [170] L. Zheng, S. Han,H. Liu, P. Yu, and X. Fang, Small, 12(11), 1527–1536 (2016)
- [171] X.Wang ,W. Xing, X. Feng, L. Song, and Y. Hu, Polymer Reviews, 57(3), 440–466 (2017).
- [172] W. U. Huynh, J. J. Dittmer and A. P. Alivisatos, Science, 295, 2425-2427 (2002)
- [173] H. Park, H. Kim, G. Moon and W. Choi, Energy Environ. Sci., 9, 411—433 (2016)
- [174] M. W. Knight, H. Sobhani, P. Nordlander and N. J. Halas, Science, 332, 702-704 (2011)
- [175] X. Chen, L. Liu, P. Y. Yu and S. S. Mao, Science, 331, 746-750 (2011)
- [176] M. Q. Yang, N. Zhang, M. Pagliaro and Y. J. Xu, Chem. Soc. Rev., 43, 8240-8254 (2014)
- [177] M. Q. Yang and Y. -J. Xu, Nanoscale Horiz., 1, 185-200 (2016)
- [178] H. Chang, Z. Sun, K. Y. F. Ho, X. Tao, F. Yan, W. M. Kwok and Z. Zheng, Nanoscale, 3, 258-264 (2011)

- [179] Y. Zhang, Z. -R. Tang, X. Fu and Y. -J. Xu, ACS Nano, 4, 7303–7314 (2010)
- [180] N. Zhang, Y. Zhang and Y. -J. Xu, Nanoscale, 4, 5792 – 5813 (2012)
- [181] W. H. Nam, B. B. Kim, S. G. Seo, Y. S. Lim, J. Y. Kim, W. S. Seo, W. K. Choi, H. H. Park and J. Y. Lee, Nano Lett., 14, 5104–5109 (2014)
- [182] C. Han, N. Zhang and Y. J. Xu, Nano Today, 11, 351–372 (2016)
- [183] N. Zhang and Y. J. Xu, Cryst. Eng. Comm, 18, 24-37 (2016)
- [184] D. S. R. Josephine, B. Sakthivel, K. Sethuraman and A. Dhakshinamoorthy, ChemistrySelect, 1, 2332 – 2340 (2016)
- [185] J. G. Radich, R. Dwyer and P. V. Kamat, J. Phys. Chem. Lett., 2, 2453–2460 (2011)
- [186] S. Ghosh, T. Pal, D. Joung, S. I. Khondaker, Appl. Phys. A, 107, 995-1001 (2012)
- [187] X. Fang, Y. Bando, M. Liao, T. Zhai, U. K. Gautam, L. Li, Y. Koide and D. Golberg, Adv. Funct. Mater., 20, 500–508 (2010)
- [188] Y. Feng, N. Feng, G. Zhang and G. Du, Cry. Eng. Comm., 16, 214-222 (2014)
- [189] X. Fang, L. Wu and L. Hu, Adv. Mater., 23, 585-598 (2011)
- [190] M. R. Gao, Y. F. Xu, J. Jiang and S. H. Yu, Chem. Soc. Rev., 42, 2986-3017 (2013)

- [191] J. S. Hu, L. L. Ren, Y. G. Guo, H. P. Liang, A. M. Cao, L. J. Wan and C. L. Bai, *Angew. Chem. Int. Ed.*, 44, 1269 –1273 (2005)
- [192] Y. M. Song, M. Yoon, S. Y, Jang, D. M. Jang, Y. J. Cho, C. H. Kim and J. Park, *J. Phys. Chem. C*, 115, 15311-15317 (2011)
- [193] Y. Zhang, N. Zhang, Z. -R. Tang and Y. -J. Xu, *ACS Nano*, 6, 9777–9789 (2012)
- [194] K. Chakraborty, S. Chakraborty, P. Das, S. Ghosh and T. Pal, *Mater. Sci. Eng. B*, 214, 8-14 (2016)
- [195] K. Chakraborty, P. Das, S. Chakraborty, T.Pal, S. Ghosh, *Chem. Phys. Chem.*, 17, 1-7 (2016)
- [196] US Environmental Protection Agency, Nitrophenols, Ambient Water Quality Criteria, USEPA, Washington, DC, 1980
- [197] O. A. O'Connor and L. Y. Young, *Environ. Toxicol. Chem.*, 8, 853-862 (1989)
- [198] S. Kaveri, L. Thirugnanam, M. Dutta, J. Ramasamy and N. Fukata, *Ceram. Int.*, 39, 9207–9214 (2013)
- [199] N. Jiang, Z. Xiu, Z. Xie, H. Li, G. Zhao, W. Wang, Y. Wu and X. Hao, *New J. Chem.*, 38, 4312 – 4320 (2014)
- [200] T. G. Xu, L. W. Zhang, H. Y. Cheng and Y. F. Zhu, *Appl. Catal. B*, 101, 382–387 (2011)

- [201] X. Liu, L. Pan, T. Lv, G. Zhu, T. Lu, Z. Sun and C. Sun, RSC. Adv., 1, 1245-1249 (2011)
- [202] F. J. Chen, Y. L. Cao and D. Z. Jia, Cryst. Eng. Comm., 15, 4747-4754 (2013)
- [203] X. Liu, L. Pan, T. Lv, T. Lu, G. Zhu, Z. Sun and C. Sun, Catal. Sci. Technol., 1, 1189-1193 (2011)
- [204] S. M. Sze, Wiley, New York, 744–745 (1981)
- [205] N. Zhang, M. Q. Yang, S. Liu, Y. Sun and Y. J. Xu, Chem. Rev., 115, 10307–10377 (2015)
- [206] N. Zhang, M. Q. Yang, Z. R. Tang and Y. J. Xu, ACS Nano, 8, 623–633 (2014)
- [207] B. Weng and Y. J. Xu, ACS Appl. Mater. Interfaces, 7, 27948–27958 (2015)
- [208] J. Nanda, A. Biswas, B. Adhikari and A. Banerjee, Angew. Chem. Int. Ed., 52, 1–6 (2013)
- [209] Y. Li, J. Shen, Y. Hu, S. Qiu, G. Min, Z. Song, Z. Sun and C. Li, Ind. Eng. Chem. Res., 54, 9750-9757 (2015) .
- [210] H. G. Lee, G. S. Anand, S. Komathi, A. Gopalana, S. W. Kang and K. P. Lee, J. Hazard. Mater., 283, 400–409 (2015)
- [211] N. Singh, K. Mondal, M. Misra, A. Sharma and R. K. Gupta, RSC Adv., 6, 48109-48119 (2016)

- [212] S. Sarkar, A. K. Guria and N. Pradhan, *Chem. Commun.*, 49, 6018–6020 (2013)
- [213] I. R. Bautitz and R. F. P. Nogueira, *J. Photochem. Photobiol. A*, 187, 33–39 (2007)
- [214] Y. Chen, C. Hu, J. Qu and M. Yang, *J. Photochem. Photobiol. A*, 197, 81–87 (2008)
- [215] R. Hao, X. Xiao, X. Zuo, J. Nan and W. Zhang, *J. Hazard. Mater.* 209–210, 137–145 (2012)
- [216] J. Jeong, W. Song, W. J. Cooper, J. Jung and J. Greaves, *Chemosphere*, 78, 533–540 (2010)
- [217] S. Ibrahim, S. Chakrabarty, S. Ghosh and T. Pal, *ChemistrySelect*, 2, 537-545 (2017)
- [218] K. Chakraborty, S. Ibrahim, P. Das, S. Ghosh and T. Pal, *J. Mater. Eng. Perform.*, 27, 2617–2621 (2018)
- [219] J. Wang, S. Liang, L. Ma, S. Ding, X. Yu, L. Zhou and Q. Wang, *Cryst. Eng. Comm.* 16, 399–405 (2014)
- [220] K. Chakraborty, T. Pal and S. Ghosh, *ACS Appl. Nano Mater.* 1, 3137-3144 (2018)
- [221] S. Ibrahim, K. Chakraborty, T. Pal and S. Ghosh, *AIP Conf. proc.*, 1832, 050005 (2017)

- [222] K. Chakraborty, S. Chakrabarty, T. Pal and S. Ghosh, New J. Chem.41, 4662 - 4671 (2017)
- [223] D. Li, M. B. Muller, S. Gilje, R. B. Kaner and G. G. Wallace, Nat. Nanotechnol., 3, 101–105 (2008) .
- [224] I. Jung, D. A. Dikin, R. D. Piner and R. S. Ruoff, Nano Lett., 8, 4283-4287 (2008)
- [225] S. Ghosh, B. K. Sarker, A. Chunder, L. Zhai and S. I. Khondaker, Appl. Phys. Lett., 96, 163109 (2010)
- [226] X. Geng, L. Niu, Z. Xing, R. Song, G. Liu, M. Sun, G. Cheng, H. Zhong, Z. Liu, Z. Zhang, L. Sun, H. Xu, L. Lu and L. Liu, Adv. Mater., 22, 638–642 (2010)
- [227] I. V. Lightcap, T. H. Kosel, P. V. Kamat, Nano Lett., 10, 577–583 (2010)
- [228] W. Ma, D. Han, S. Gan, N. Zhang, S. Liu, T. Wu, Q. Zhang, X. Dong and L. Niu, Chem. Commun., 49, 7842-7848 (2013)
- [229] V. Lightcap and P. V. Kamat, J. Am. Chem. Soc.,134, 7109–7116 (2012)
- [230] K Chakraborty, P Das, S Chakrabarty, T Pal and S Ghosh, Chem. Phys. Chem.,17, 1518-1523 (2016)
- [231] X. Geng, L. Niu, Z. Xing, R. Song, G. Liu, M. Sun, G. Cheng, H. Zhong, Z. Liu, Z. Zhang, L. Sun, H. Xu, L. Lu and L. Liu, Adv. Mater., 22, 638–642 (2010)

- [232] V. Singh, D. Joung, L. Zhai, S. Das and S.I. Khondaker, S. Seal, *Prog. Mater. Sci.*, 56, 1178-1271 (2011)
- [233] Y. Dai, Y. Sun, J. Yao, D. Ling, Y. Wang, H. Long, X. Wang, B. Lin, T. H. Zeng and Y. Sun, *J. Mater. Chem. A*, 2, 1060-1067 (2014)
- [234] Q. P. Luo, X. Y. Yu, B. X. Lei, H. Y. Chen, D. B. Kuang and C. Y. Su, *J. Phys. Chem. C*, 116, 8111–8117 (2012)
- [235] R. Yousefi, M. R. Mahmoudian, A. Saaedi, M. Cheraghizade, F. J. Sheini and M. Azarang, *Ceramics International*, doi:10.1016/j.ceramint.2016.06.155
- [236] R. E. Bailey and S. Nie, *J. Am. Chem. Soc.*, 125, 7100–7106 (2003)
- [237] Y. C. Li, M. F. Ye, C. H. Yang, X. H. Li and Y. F. Li, *Adv. Funct. Mater.*, 15, 433–441 (2005)
- [238] S. Chakrabarty, K. Chakraborty, A. Laha, T. Pal and S. Ghosh, *J. Phys. Chem. C*, 118, 28283–28290 (2014)
- [239] J. Zhang, J. Yu, M. Jaroniec and J. R. Gong, *Nano Lett.* 12, 4584–4589 (2012)
- [240] F. A. Carey, *Organic Chemistry*, 4th ed., McGraw-Hill, New York, 945 (2000)
- [241] O. A. O'Connor and L. Y. Young, *Environ. Toxicol. Chem.*, 8, 853-862 (1989)

- [242] Q. Li, H. Meng, P. Zhou, Y. Zheng, J. Wang, J. Yu and J. Gong, ACS Catal., 3, 882–889 (2013)
- [243] S. Shen, A. Ma, Z. Tang, Z. Han, M. Wang, Z. Wang, L. Zhi, and J. Yang, ChemCatChem., 7, 609 – 615 (2015)
- [244] W. S. Hummers and R. E. Offeman, J. Am. Chem. Soc., 80, 1339 (1958)
- [245] H-J Shin, K K Kim, A Benayad, S-Mi Yoon, H K Park, I-S Jung, M H Jin, H-K Jeong, J M Kim, J-Y Choi and Y H Lee, Adv. Funct. Mater., 19, 1987–1992 (2009)
- [246] S. Sahoo, S. Dhara, V. Sivasubramanian, S. Kalavathi and A. K. Arora, J. Raman Spectrosc., 40, 1050–1054 (2009)
- [247] V. Narasimman, V. S. Nagarethinam, K. Usharani and A. R. Balu, Int. J. Thin. Fil. Sci. Tec., 5, 17-24 (2016)
- [248] P. Cui, J. Lee, E. Hwang and H. Lee, Chem. Commun., 47, 12370–12372 (2011)
- [249] J P Mensing, T Kerdcharoen, C Sriprachuabwong, A Wisitsoraat, D Phokharatkul, T Lomas and A Tuantranont, J. Mater. Chem., 22, 17094-17099 (2012)
- [250] P. Saritha, C. Aparna, V. Himabindu and Y. Anjaneyulu, J. Hazard. Mater., 149, 609–614 (2007)
- [251] W. Zhang, X. Xiao, T. An, Z. Song, J. Fu, G. Sheng and M. Cui, J. Chem. Technol. Biotechnol., 78, 788–794 (2003)

- [252] N. K. Novoselov, D. Jiang, F. Schedin, T. Booth, V. V. Khotkevich, S. V. Morozov and A. K. Geim, Proc. Natl. Acad. Sci., 102, 10451 (2005)
- [253] S. Lei, F. Wen, B. Li, Q. Wang, Y. Huang, Y. Gong, Y. He, P. Dong, J. Bellah, A. George, J. Lou, N. J. Halas, R. Vajtai and P.M. Ajayan, Nano Lett., 15, 259 (2015)
- [254] F. Xia, H. Wang, D. Xiao, M. Dubey and A. Ramasubramaniam, Nat. Photon., 8, 899 (2014)
- [255] K. S. Novoselov, A. Mishchenko, A. Carvalho and A. H. Castro Neto, Science, 353, 9439 (2016)
- [256] K. F. Mak and J. Shan, Nat. Photon., 10, 216 (2016)
- [257] W. S. Hwang, M. Remskar, R. Yan, V. Protasenko, K. Tahy, S. D. Chae, P. Zhao, A. Konar, H. Xing, A. Seabaugh and D. Jena, Appl. Phys. Lett., 101, 013107 (2012)
- [258] Z. Wang, Q. Li, F. Besenbacher and M. Dong, Adv. Mater., 28, 10224 (2016)
- [259] W. Huang, L. Gan, H. Li, Y. Ma and T. Zhai, CrystEngComm., 18, 3968 (2016)
- [260] K. F. Mak, C. Lee, J. Hone, J. Shan and T. F. Heinz, Phys. Rev. Lett., 105, 136805 (2010)
- [261] Z. Y. Yin, H. Li, H. Li, L. Jiang, Y. Shi, Y. Sun, G. Lu, Q. Zhang, X. Chen and H. Zhang, ACS Nano, 6, 74 (2012)

- [262] H. S. Lee, S. W. Min, Y. G. Chang, M. K. Park, T. Nam, H. Kim, J. H. Kim, S. Ryu and S. Im, *Nano Lett.*, 12, 3695 (2012)
- [263] J. Feng, X. F. Qian, C. W. Huang and J. Li, *Nat. Photon*, 6, 866 (2012)
- [264] M. Bernardi, M. Palummo and J. C. Grossman, *Nano Lett.*, 13, 3664 (2013)
- [265] Y. Ye, Z. Ye, M. Gharghi, H. Zhu, M. Zhao, Y. Wang, X. Yin and X. Zhang, *Appl. Phys. Lett.*, 104, 193508 (2014)
- [266] G. Eda, H. Yamaguchi, D. Voiry, T. Fujita, M. Chen and M. Chhowalla, *Nano Lett.*, 12, 5111 (2011)
- [267] G. S. Bang, K. W. Nam, J. Y. Kim, J. Shin, J. W. Choi and S. Y. Choi, *ACS Appl. Mater. Interfaces*, 6, 7084 (2014)
- [268] H. Yu, W. Zhong, X. Huang, P. Wang and J. Yu, *ACS Sustainable Chem. Eng.*, 6, 5513 (2018)
- [269] X. Liu, C. Ma, Y. Yan, G. Yao, Y. Tang, P. Huo, W. Shi and Y. Yan, *Ind. Eng. Chem. Res.*, 52, 15015 (2013)
- [270] M. Duan, J. Li, G. Mele, C. Wang, X. Lü, G. Vasapollo and F. Zhang, *J. Phys. Chem. C*, 114, 857 (2010)
- [271] C. Han, N. Zhang and Y. J. Xu, *Nano Today*, 11, 351 (2016)
- [272] W. Lu, T. Xu, Y. Wang, H. Hu, N. Li, X. Jiang and W. Chen, *Appl. Catal. B - Environ.*, 20, 180 (2016)

- [273] N. Karousis, J. Ortiz, K. Ohkubo, T. Hasobe, S. Fukuzumi, A. Santos and N. Tagmatarchis, *J. Phys. Chem. C*, 116, 20564 (2012)
- [274] D. Sharma, A. Huijser, J. Savolainen, G. Steen and J. L. Herek, *Faraday Discuss.*, 163, 433 (2013)
- [275] N. S. Lebedeva, E. V. Parfenyuk and E. A. Malkova, *Spect. Acta Part A*, 68, 491 (2007)
- [276] M. V. Leeuwen, A. Beeby, I. Fernandes and S. H. Ashworth, *Photochem. Photobiol. Sci.*, 13, 62 (2014)
- [277] Y. Lu, D. Wang, P. Yang, Y. Dua and C. Lu, *Catal. Sci. Technol.*, 4, 2650 (2014)
- [278] Q. J. Xiang, J. G. Yu and M. Jaroniec, *Chem. Soc.*, 134, 6575 (2012)
- [279] X. L. Li and Y. D. Li, *J. Phys. Chem. B*, 108, 13893 (2004)
- [280] G. Ma, H. Peng, J. Mu, H. Huang, X. Zhou and Z. Lei, *J. Power Sources*, 72, 229 (203)
- [281] K. Chang and W. Chen, *Chem. Commun.*, 47, 4252 (2011)
- [282] A. S. Patel, P. Mishra, P. K. Kanaujia, S. S. Husain, G. Vijaya Prakash and A. Chakraborti, *RSC Adv.*, 7, 26250 (2017)
- [283] S. Campidelli, B. Ballesteros, A. Filoramo, D. D. Díaz, G. Torre, T. Torres, G. M. A. Rahman, C. Ehli, D. Kiessling, F. Werner, V. Sgobba, D. M. Guldi, C. Cioffi, M. Prato and J. P. Bourgoin, *J. Am. Chem. Soc.*, 130, 11503 (2008)

- [284] A. A. Zanfolim, D. Volpati, C. A. Olivati, A. E. Job and C. J. L. Constantino, *J. Phys. Chem. C*, 114, 12290 (2010)
- [285] D. Gao, M. Si, J. Li, J. Zhang, Z. Zhang, Z. Yang and D. Xue, *Nanoscale Res. Lett.*, 8, 129 (2013)
- [286] H. T. Lin, X. Y. Chen, H. L. Li, M. Yang and Y. X. Qi, *Mater. Lett.*, 64, 1748 (2010)
- [287] B. Liu, L. Chen, G. Liu, A. N. Abbas, M. Fathi and C. Zhou, *ACS Nano*, 8, 5304 (2014)
- [288] C. Lee, H. Yan, L. E. Brus, T. F. Heinz, J. Hone and S. Ryu, *ACS Nano*, 4, 2695 (2010)
- [289] B. Adhikari, A. Biswas and A. Banerjee, *ACS Appl. Mater. Interfaces*, 4, 5472 (2012)
- [290] S. Sarkar, A. K. Guria and N. Pradhan, *Chem. Commun.*, 49, 6018 (2013)
- [291] M. Bano, D. Ahirwar, M. Thomas, G. A. Naikoo, M. U. D. Sheikh and F. Khan, *New J. Chem.*, 40, 6787 (2016)
- [292] W. Zhang, Z. Zhou, X. Shan, R. Xu, Q. Chen, G. He, X. Sun and H. Chen, *New J. Chem.*, 40, 4769 (2016)
- [293] W. Gao, W. Li, Z. Xue, M. Pal, Y. Liu, C. Wang, J. Wang, S. Wang, X. Wan, Y. Liu and D. Zhao, *New J. Chem.*, 40, 4200 (2016)

[294] J. Kang, S. Tongay, J. Zhou, J. Li and J. Wu, Appl. Phys. Lett., 102, 012111 (2013)