

- ERRATA

- Páginas 16 e 17: Leia-se Si^{4+} ; Al^{3+} ; Mg^{2+} e Ca^{2+} , ao invés de $\text{Si}(4+)$, $\text{Al}(3+)$, $\text{Mg}(2+)$ e $\text{Ca}(2+)$, respectivamente.
- Página 17: Excluir a palavra “física” da primeira linha do item 1.4).
- Página 26: Leia-se “...a intercalação do poli(vinilalcool), PVAL, em ...” ao invés de “polivinilalcool (PVOH)...”.
- Página 34: No primeiro parágrafo, substituir a palavra “Quartzo” por “vidro”.
- Página 35: Leia-se “psig (pounds per square inch gauge)” ao invés de “psig”.
- Página 37: No título do item 4.1.1) leia-se “por espectroscopia infravermelho” ao invés de “de infravermelho”.
- Página 37: Leia-se “...destacando-se nas duas figuras a banda em 1046 ...” ao invés de “...a vibração em 1046...”.
- Página 37: Na tabela 3, leia-se “número de onda” ao invés de “comprimento de onda”.
- Na abcissa das figuras 11 a 14, leia-se “Número de Onda (cm^{-1})” ao invés de “Comprimento de Onda (cm^{-1})”.
- Página 47: Substituir a expressão “o gráfico da análise termogravimétrica” por “a curva termogravimétrica”; e o termo “primeira derivada” por “derivada primeira” nesta e nas demais páginas em que aparecerem.
- Página 52: Na terceira linha, leia-se “...a quantidade real ...” ao invés de “... a quantidade correta...”; e substituir a expressão “rampa definida de variação de temperatura” por “taxa de aquecimento”.
- Na ordenada das Figuras 26, 28, 30 e 31, leia-se “DTG (%massa/°C)” ao invés de “DTG (%/min)”.
- Página 74: Substituir a expressão “pico” por “halo” ao se referir ao sinal da fase amorfa.
- Página 74: Na legenda da figura 39, excluir a frase “Traduzir para o português os dados da figura”.
- Na abcissa das figuras 41 a 50, leia-se “ 2θ (graus)” ao invés de “Graus (2θ)”.

- Página 103: Correção dos nome dos autores nas citações bibliográficas.
 1. Duran, N., L.H.C. Mattoso, and P.C.d. Morais, *Nanotecnologia: Introdução, Preparação e Caracterização de Nanomateriais e Exemplos de Aplicação*. Editora Artliber, 2006.

2. Fishbine, G., *The inventor's guide to nanotechnology & micromachines*. John Wiley & Sons, Inc.: New York, 2002.
3. Kickelbick, G., *Concepts for the incorporation of inorganic building blocks into organic polymers on a nanoscale*. Progress in Polymer Science, 2003. 28: p. 83-114.
4. Tamura, K., et al., *New Age of Polymer Nanocomposites Containing Dispersed High-Aspect-Ratio Silicate Nanolayers*. Chemistry of Materials, 2008. 20: p. 2242-2246.
5. Alexandre, M. and P. Dubois, *Polymer-layered silicate nanocomposites: preparation, properties and uses of a new class of materials*. Materials Science and Engineering, 2000. 28: p. 1-63.
6. Murray, H.H., *Traditional and new applications for kaolin, smectite, and palygorskite: a general overview* Applied Clay Science, 2000. 17: p. 207-221
7. Ray, S.S. and M. Okamoto, *Polymer/layered silicate nanocomposites: a review from preparation to processing*. Progress in Polymer Science, 2003. 28: p. 1539-1641.
8. Komarneni, S., *Nanocomposites*. Journal of Materials Chemistry, 1992. 2: p. 1219-1230.
9. Kojima, Y., et al., *Synthesis of nylon 6-clay hybrid by montmorillonite intercalated with -E-caprolactam*. Journal of Polymer Science Part A: Polymer Chemistry, 2003. 31: p. 983-986.
10. Vaia, R.A., H. Ishii, and E.P. Giannelis, *Synthesis and properties of two-dimensional nanostructures by direct intercalation of polymer melts in layered silicates*. Chemistry of Materials, 1993. 5: p. 1694-1696.
11. Lyon, R.E., *Fire-Resistant Materials: Research Overview*. National Technical Information Service (NITS), Office Aviation Research, 1997.
12. Yang, J., *Nano-scale research and technology development for automotive applicatios*. NSF Workshop on Three-Dimensional Nanomanufacturing: Patterning with Industry, Research and Development Center (General Motors), 2003.
13. Koo, J.H., et al., *Flammability Properties of Polymer Nanostructured Materials*. Society for the Advancement of Material and Process Engineering, 2003.
14. Wang, S., et al., *Flammability and phase-transition studies of nylon 6/montmorillonite nanocomposites*. Colloid Polymer Science, 2003. 281: p. 951-956.
15. Gilman, J.W., *Flammability and thermal stability studies of polymer layered-silicate clay nanocomposites*. Applied Clay Science, 1999. 15: p. 31-49.
16. Santos, P.d.S., *Ciência e Tecnologia de Argilas*. 2ª Edição, São Paulo, Editora Edgard Blücher, 1989. 1.

17. Murray, H.H., *Applied Clay Mineralogy: Occurrences, Processing and Applications of Kaolins, Bentonites, Palygorskitesepiolite, and Common Clays (Developments in Clay Science)*. Elsevier, 2007. 2.
18. Pavlidou, S. and C.D. Papaspyrides, *A review on polymer-layered silicate nanocomposites*. Progress in Polymer Science, 2008. 33: p. 1119-1198.
19. Jackson, M.L., *Soil Chemical Analysis Advanced Course*. 2ª Edição, Madison Wis, 1985.
20. Fukushima, Y., et al., *Swelling behaviour of montmorillonite by poly-6-amide*. Clay Minerals, 1988. 23: p. 27-34.
21. Paul, D.R. and L.M. Robeson, *Polymer nanotechnology: Nanocomposites*. Polymer, 2008. 49: p. 3187-3204.
22. Harrats, C. and G. Groeninckx, *Features, Questions and Future Challenges in Layered Silicates Clay Nanocomposites with Semicrystalline Polymer Matrices*. Macromolecular Rapid Communications, 2008. 29: p. 14-26.
23. Brody, A.L. and K.S. Marsh, *The Wiley Encyclopedia of Packaging Technology* 2ª Edição, EUA: John Wiley and Sons, Inc., 1997: p. 1048.
24. Osswald, et al., *International Plastics Handbook - The Resource for Plastics Engineers*. Munique: Hanser, 1983.
25. Brampton Engineering, *Apresenta informações sobre máquinas e sistemas de extrusão*. Disponível em: <<http://www.be-ca.com>>. Acesso em: 09/10/2009.
26. Zanetti, M., S. Lomakina, and G. Camino, *Polymer layered silicate nanocomposites*. Macromolecular Materials and Engineering, 2000. 279: p. 1-9.
27. Zhang, J., E. Manias, and C.A. Wilkie, *Polymerically Modified Layered Silicates: An Effective Route to Nanocomposites*. Journal of Nanoscience and Nanotechnology, 2008. 8: p. 1597-1615.
28. Greenland, D.J., *Adsorption of polyvinyl alcohols by montmorillonite*. Journal of Colloid Science, 1963. 18: p. 647-664.
29. Mohamadi, S., et al., *Preparation of Nylon 6-Organoclay Nanocomposites via In-Situ Polymerization and Investigation of the Crystalline and Thermal Properties*. Journal of Nanoscience and Nanotechnology, 2009. 9: p. 3959-3965.
30. LeBaron, P.C., Z. Wang, and T.J. Pinnavaia, *Polymer-layered silicate nanocomposites: an overview*. Applied Clay Science, 1999. 15: p. 11-29.

31. Weimer, M.W., et al., *Direct Synthesis of Dispersed Nanocomposites by in Situ Living Free Radical Polymerization Using a Silicate-Anchored Initiator*. Journal of the American Chemical Society, 1999. 121: p. 1615-1616.
32. J.W. Cho, D.R.P., *Nylon 6 nanocomposites by melt compounding*. Polymer, 2001. 42: p. 1083-1094.
33. Demirkol, E.A. and D.M. Kalyon, *Batch and Continuous Processing of Polymer Layered Organoclay Nanocomposites*. Journal of Applied Polymer Science, 2007. 104: p. 1391-1398.
34. Hasegawa, N., et al., *Nylon 6/Na-montmorillonite nanocomposites prepared by compounding Nylon 6 with Na-montmorillonite slurry*. Polymer, 2003. 44: p. 2933-2937.
35. Dennis, H.R., et al., *Effect of melt processing conditions on the extent of exfoliation in organoclay-based nanocomposites*. Polymer, 2001. 42: p. 9513-9522
36. T. D. Fornes, P.J.Y., H. Keskkula and D. R. Paul, *Nylon 6 nanocomposites: the effect of matrix molecular weight* Polymer, 2001. 42: p. 9929-9940.
37. Liu, L., Z. Qi, and X. Zhu, *Studies on nylon-6 clay nanocomposites by melt intercalation process*. Journal of Applied Polymer Science, 1999. 71: p. 1133-1138.
38. González, T.V., et al., *Nylon 6/Organoclay Nanocomposites by Extrusion*. Journal of Applied Polymer Science, 2008. 108: p. 2923-2933.
39. Russo, G.M., et al., *Rheological and mechanical properties of nylon 6 nanocomposites submitted to reprocessing with single and twin screw extruders*. Polymer Degradation and Stability, 2007. 92: p. 1925-1933.
40. Lim, L.-T., I.J. Britt, and M.A. Tung, *Sorption and Transport of Water Vapor in Nylon 6,6 Film*. Journal of Applied Polymer Science, 1999. 71: p. 197-206.
41. Ślusarczyk, C., et al., *DSC and Two-dimensional Correlation Infrared Spectroscopy Studies of PA6/Montmorillonite Composite Fibres*. FIBRES & TEXTILES in Eastern Europe, 2007. 15: p. 22-26.
42. Zhao, X.-y., *Thermal history dependence of polymorphic transformation of polyamide 6/silicate nanocomposites*. Polymer International, 2009. 58: p. 469-474.
43. Goitisoló, I., J.I. Eguiazábal, and J. Nazábal, *Effects of reprocessing on the structure and properties of polyamide 6 nanocomposites*. Polymer Degradation and Stability, 2008. 93: p. 1747-1752.

44. Wu, Q., X. Liu, and L.A. Berglund, *An Unusual Crystallization Behavior in Polyamide 6/Montmorillonite Nanocomposites*. *Macromolecular Rapid Communications*, 2001. 22: p. 1438-1440.
45. Ranade, A., et al., *Nylon-6 and montmorillonite-layered silicate (MLS) nanocomposites*. *Journal of Plastic Film and Sheeting* 2003. 19: p. 271-285.
46. Lincolna, D.M., et al., *Secondary structure and elevated temperature crystallite morphology of nylon-6/layered silicate nanocomposites*. *Polymer*, 2001. 42: p. 1621-1631.
47. Zhao, X.-Y. and M.-Z. Wang, *Structure and Thermal Behaviour of Nylon 6 Nanocomposites*. *Journal of Applied Polymer Science*, 2006. 100: p. 3116-3122.
48. Yebra-Rodríguez, A., et al., *Crystalline properties of injection molded polyamide-6 and polyamide-6/montmorillonite nanocomposites*. *Applied Clay Science*, 2009. 43: p. 91-97.
49. Devaux, E., S. Bourbigot, and A.E. Achari, *Crystallization Behavior of PA-6 Clay Nanocomposite Hybrid*. *Journal of Applied Polymer Science*, 2002. 86: p. 2416-2423.
50. Katoh, Y. and M. Okamoto, *Crystallization controlled by layered silicates in nylon 6-clay nano-composite*. *Polymer*, 2009. 50: p. 4718-4726.
51. Maiti, P. and M. Okamoto, *Crystallization Controlled by Silicate Surfaces in Nylon 6-Clay Nanocomposites*. *Macromolecular Materials and Engineering*, 2003. 288: p. 440-445.
52. Miri, V., et al., *Crystallization Kinetics and Crystal Structure of Nylon6-Clay Nanocomposites: Combined Effects of Thermomechanical History, Clay Content, and Cooling Conditions*. *Macromolecules*, 2008. 41: p. 9234-9244.
53. Fornes, T.D., P.J. Yoon, and D.R. Paul, *Polymer matrix degradation and color formation in melt processed nylon 6/clay nanocomposites*. *Polymer*, 2003. 44: p. 7545-7556.
54. Kiliaris, P., C.D. Papaspyrides, and R. Pfaendner, *Influence of accelerated aging on clay-reinforced polyamide 6*. *Polymer Degradation and Stability*, 2009. 94: p. 389-396.
55. Cervantes-Uc, J.M., et al., *Thermal degradation of commercially available organoclays studied by TGA-FTIR*. *Thermochimica Acta*, 2007. 457: p. 92-102.
56. Scaffaro, R., et al., *Effect of heating of organo-montmorillonites under different atmospheres*. *Applied Clay Science*, 2009. 45: p. 185-193

57. Han, B., et al., *Preparation and characterization of nylon 66/montmorillonite nanocomposites with co-treated montmorillonites*. European Polymer Journal, 2003. 39: p. 1641-1646.
58. Mikiya Ito, K.N., *Evaluation of Degradation on Nylon-6 and Nylon-6/Montmorillonite Nanocomposite by Color Measurement*. Journal of Applied Polymer Science, 2008. 108: p. 3487-3494.
59. Lakshminarayanan, S., et al., *Effect of Clay Surfactant Type and Clay Content on the Rheology and Morphology of Uncured Fluoroelastomer/Clay Nanocomposites Prepared by Melt-Mixing*. Journal of Applied Polymer Science, 2009. 112: p. 3597-3604.
60. Zhang, X. and L.S. Loo, *Synthesis and thermal oxidative degradation of a novel amorphous polyamide/nanoclay nanocomposite*. Polymer, 2009. 20: p. 2643-2654.
61. Homminga, D.S., et al., *Crystallization behavior of polymer/montmorillonite nanocomposites. Part III. Polyamide-6/montmorillonite nanocomposites, influence of matrix molecular weight, and of montmorillonite type and concentration*. Polymer, 2006. 47: p. 1630-1639.
62. Brindley, G.W. and G. Brown, *Crystal Structures of Clay Minerals and their X-ray Identification*. Mineralogical Society, Londres, 1980. Chapter 2.
63. Fornes, T.D. and D.R. Paul, *Crystallization behavior of nylon 6 nanocomposites*. Polymer, 2003. 44: p. 3945-3961.
64. Lincoln, D.M., et al., *Temperature dependence of polymer crystalline morphology in nylon 6/montmorillonite nanocomposites*. Polymer, 2001. 42: p. 9975-9985.
65. Morgan, A.B. and J.W. Gilman, *Characterization of Polymer-Layered Silicate (Clay) Nanocomposites by Transmission Electron Microscopy and X-Ray Diffraction: A Comparative Study*. Journal of Applied Polymer Science, 2003. 87: p. 1329-1338.
66. Vermogen, A., et al., *Clay Dispersion and Aspect Ratios in Polymer-Clay Nanocomposites*. Journal of Nanoscience and Nanotechnology, 2007. 7: p. 3160-3171.
67. Yebra-Rodríguez, A., et al., *Thermo-XRD and differential scanning calorimetry to trace epitaxial crystallization in PA6/montmorillonite nanocomposites*. Materials Letters, 2009. 63: p. 1159-1161.
68. Liu, X. and Q. Wu, *Non-isothermal crystallization behaviors of polyamide 6/clay nanocomposites*. European Polymer Journal, 2002. 38: p. 1383-1389.
69. Usuki, A., et al., *Three-Dimensional Observation of Structure and Morphology in Nylon-6/Clay Nanocomposite*. Nano Letters, 2001. 1: p. 271-272.

70. Zhang, G., Y. Li, and D. Yan, *γ -Crystalline form of nylon-10,10 in nylon-10,10-montmorillonite nanocomposite*. *Polymer International*, 2003. 52: p. 795-798.
71. Loo, L.S. and K.K. Gleason, *Investigation of polymer and nanoclay orientation distribution in nylon6/montmorillonite nanocomposite*. *Polymer*, 2004. 45: p. 5933-5939.
72. J.S. Shelleya, P.T.M., K.L. DeVries, *Reinforcement and environmental degradation of nylon-6/clay nanocomposites*. *Polymer*, 2001. 42: p. 5849-5858.
73. Tamura, K., et al., *Layered Silicate-Polyamide-6 Nanocomposites: Influence of Silicate Species on Morphology and Properties*. *Journal of Polymer Science: Part B: Polymer Physics*, 2009. 47: p. 583-595.
74. Wilkinson, A.N., et al., *Tensile properties of melt intercalated polyamide 6 – Montmorillonite nanocomposites*. *Composites Science and Technology*, 2007. 67: p. 3360-3368.
75. Picard, E., J.F. Gérard, and E. Espuche, *Water transport properties of polyamide 6 based nanocomposites prepared by melt blending: On the importance of the clay dispersion state on the water transport properties at high water activity*. *Journal of Membrane Science*, 2008. 313: p. 284-295.
76. Vlasveld, D.P.N., et al., *Moisture absorption in polyamide-6 silicate nanocomposites and its influence on the mechanical properties*. *Polymer*, 2005. 46: p. 12567-12576.
77. Hu, Y.S., et al., *Effect of Water Sorption on Oxygen-Barrier Properties of Aromatic Polyamides*. *Journal of Polymer Science*, 2005. 43: p. 1365-1381.
78. Tyan, H.-L., C.-Y. Wu, and K.-H. Wei, *Effect of Montmorillonite on Thermal and Moisture Absorption Properties of Polyimide of Different Chemical Structures*. *Journal of Applied Polymer Science*, 2001. 81: p. 1742-1747.