

5 Referências bibliográficas

- 1 Coropceanu, V. et al., *Chemical Review* **107**, p. 926-952, 2007.
- 2 Charles Kittel: *Introduction to Solid State Physics*-Wiley, 2005.
- 3 Fincher, *Physical Review Letters* **48**, 100, 1982.
- 4 Kahlert, *Synthetic Metals* **17**, 467, 1987.
- 5 Zhu, *Solid State Communications* **83**, 179, 1992.
- 6 Yannoni, *Physical Review Letters* **51**, 1191, 1983.
- 7 M.C. Petty. *Molecular Electronics: From Principles to Practice*. Wiley-Interscience.
- 8 Heck, B. et al., *Polymer* **48**, p. 1352-1359, 2007.
- 9 Nardes, A. M., Dissertação de Mestrado, Technische Universiteit Eindhoven, 2007.
- 10 Montero, J. M. e Bisquert, J., *Solid-State Eletronics* **55**, p. 1-4, 2011.
- 11 Peter Hannafordn, *Nature* **485**, 2012.
- 12 Advanced Industrial Science and Technology.
- 13 Disponível em <www.alliedmarketresearch.com>.
- 14 Fert, A., et al., *Physical Review Letters* **61**, p. 2472, 1988.
- 15 Arthur Epstein, *Synthetic Metals* **125**, 1, 2001.
- 16 Epstein, Arthur. Foreword. *Synthetic Metals* **125**, p.1, 2002.
- 17 Kalinowski, J. et al., *Chemical Physics Letters* **380**, p. 710-715, 2003
- 18 Thomson, Willam. *Proceedings of the Royal Society of London* **8**, 1856.
- 19 Moodera, J.S. et al., *Physical Review Letters* **74**, p. 3273, 1995.
- 20 Julliére, M., *Physics Letters A* **54**, p. 225-226, 1975.
- 21 P. Grünberg et al., *Physical Review B* **39**, p. 4828, 1989.
- 22 Ehrenreich, H., Spaepen, F., *Solid State Physics* **56**, p. 113-237, 2001.
- 23 Huicong, Q., *Advanced E & M*, p. 1-6, 2008.
- 24 B., Dieny et al., *Physical Review B* **43**, p. 1297, 1991.
- 25 D.L., Zhang et al., *Journal of Magnetism and Magnetic Materials* **323**, 2010.
- 26 Francis, T. L. et al., *New Journal of Physics* **6**, 185, 2004.

- 27 R. Giro et al., *Physical Review B* **87**, 125204, 2013.
- 28 O. Mermer et al., *Physical Review B* **72**, 205202, 2005
- 29 Frankevich, E., Balabanov, E., *JETP Letters* **1**, p. 169, 1965
- 30 Groff, R.P. et al., *Physical Review Letters* **29**, 429, 1972.
- 31 David, A. H., Bussmann, K., *Journal of Applied Physics* **93**, 10, 2003.
- 32 Y. Sheng et al., *Physical Review B* **74**, 045213 (2006).
- 33 Y. Sheng et al., *Physical Review B* **75**, 035202 (2007).
- 34 L. Nuccio et al., *Physical Review Letters* **110**, 216602 (2013).
- 35 K. Xu, et al., *Organic Electronics* **15**, 590–594 (2014).
- 36 V. N. Prigodin, et al., *Synthetic Metals* **156**, 757–761 (2006).
- 37 Y. Wu, B. Hu, *Applied Physics Letters* **89**, 203510, 2006.
- 38 Markus Wohlgemann, *Physical Status Solidi RRL* **6**, 6 (2012).
- 39 P. Shakya et al., *Journal of Applied Physics* **103**, 103715 (2008).
- 40 J. Rybicki et al., *Synthetic Metals* **160**, 280, (2010).
- 41 Zhao Jun-Qing et al., *Chinese Physics B* **21**, 5 (2012).
- 42 J.Q. Zhao et al., *Material Science Engineering*, (2016).
- 43 Mermer, O. et al., *Solid State Communications* **134**, p. 631-636, 2005.
- 44 Disponível em <<http://wwwoledinfo.com/superamoled>>
- 45 Disponível em <http://www.lighting.philips.com/main/products/oled>
- 46 Chen, B.J. et al., *Applied Physics Letters* **75**, p. 4010, 1999.
- 47 Teixeira, K. C., Dissertação de Mestrado, PUC-Rio, 2010.
- 48 D. R. McCamey et al., *Nature Materials* **7**, 2008.
- 49 Quirino, W., *Thin Solid Films* **494**, p. 23-27, 2006.
- 50 W.G. Quirino et al., *Thin Solid Films* **517** (2008) 1096.
- 51 E. Niyama et al., *Spectrochim. Acta A* **61** (2005) 2643.
- 52 R. H. Fowler, L. W. Nordheim. Proc. Roy. Soc. Lond. A, 119, 1928..
- 53 P.S. Davids, I.H. Campbell, D.L. Smith., *Journal Applied Physics* **82**, 1997.
- 54 J. J. M. van der Holst et al., *Physical Review B* **79**, 2009.
- 55 R. H. Parmenter, W. Rupel, *Journal of Applied Physics* **30**, 1548, 1959.
- 56 Ouerghemmi, H. B., et al., *Synthetic Metals* **159**, p. 551-555, 2009.
- 57 Dexter, D. L., *The Journal of Chemical Physics* **21**, 5, p. 836, 1953.
- 58 Förster, T., *10th Spiers Memorial Lecture*, p. 7-17, 1959.
- 59 Sá, G. F. et al., *Coordination Chemistry Reviews* **196**, p. 165-195, 2000.
- 60 Sá, G. F. et al., *Coordination Chemistry Reviews* **196**, p. 165-195, 2000.

- 61 S. Solin, T. Thio, D.R. Hines, J.J. Heremans, *Science* **289**, 1530–1532, 2000.
- 62 A.L. Efros, B.I. Shklovskii, *Electronic Properties of Doped Semiconductors*, Springer-Verlag, 1984.
- 63 G. Bergmann, *Physical Review Letters* **49**, 162–164, 1982.
- 64 Yu Z G, Ding F Z, Wang H B, *Physical Review B* **87**, 205446, 2013.
- 65 M. A. Baldo, S. R. Forrest, *Physical Review B* **62**, 10958, 2000.
- 66 Y. Wang et al., *Physical Review B* **90**, 060204(R), 2014.
- 67 Christoph Boehme, John M. Lupton, *Nature Nanotechnology* **8**, 2013.
- 68 Yang Fu-Jiang, Han Shi-Xuan, Xie Shi-Jie, *Chinese Physics B* **23**, No. 5, 058106, 2014.
- 69 F. Macià et al., *Nature Communications* **5**, 3609, 2014.
- 70 Pratik Desai, P. Shakya, T. Kreouzis, W. P. Gillin, *Physical Review B* **75**, 094423, 2007.
- 71 R. Liu et al., *Journal of Applied Physics* **105**, 093719, 2009.
- 72 T. D. Nguyen et al., *Science and Technology of Advanced Materials* **9**, 024206, 2008.
- 73 F. J. Wang, H. Bassler, Z. V. Vardeny, *Physical Review Letters* **101**, 236805, 2008
- 74 E. L. Frankevich et al., *Physical Review B* **46**, 15, 1992.
- 75 S. Majumdar et al., *Physical Review B* **79**, 201202, 2009.
- 76 M. N. Bussac, L. Zuppiroli, *Physical Review B* **47**, 5493, 1993.
- 77 O. Chauvet et al., *Physical Review B* **52**, R13118, 1995.
- 78 Bobbert, P. A. et al., *Physical Review Letters* **99**, 216801, 2007.
- 79 Niedermeier U., Tese de doutorado, Universidade Tecnologica de Darmstadt, 2009.
- 80 Heraeus Clevios GmbH. Disponível em <<https://www.heraeus.com>>
- 81 Disponível em <<http://www.lumtec.com.tw/>>
- 82 Othman, M. K. et al., *ICSE2006 Proc.* 2006.
- 83 Yamaguchi, M. e Nagano, T., *Thin Solid Films* **363**, 21, 2001.
- 84 Wu, Z. et al., *Semiconductor Science Technology* **18**, 2003.
- 85 Sun Q. J. et al., *Applied Physics Letters* **88**, 163510, 2006.
- 86 Legnani, C. et al., *Thin Solid Films* **515**, P. 902-906, 2006.
- 87 Sassaki, C. A., Dissertação de Mestrado, Escola Politécnica, USP, 1989.

- 88 J. P. McKlevy, *Solid State and Semiconductor Physics*, Harpers & Row, NY, 1966.
- 89 Aderne, R. E., Dissertação de Mestrado, PUC-Rio, 2013.
- 90 Kahlert, H. e Seiler, D. G., *Review of Scientific Instruments* **48**, 8, 1977.
- 91 Wohlgenannt, M. et al., *Physical Review B* **77**, 235209, 2008.
- 92 Koopmans B. et al., *Applied Physics Letters* **97**, 123301, 2010.
- 93 Leonardo, C. R., Dissertação de Mestrado, CBPF, 2008.
- 94 Wagemans, W., *Spin transport and intrinsic magnetoresistance in organic semiconductors*, Tese de Doutorado, Universidade de Eindhoven, 2010.
- 95 Sheng et al., *Physical Review B* **74**, 045213, 2006.
- 96 Ronaldo Giro et al. *Physical Review B* **87**, 125204, 2013.
- 97 M. A. Guedes et al., *Journal of Luminescence* **131**, 99, (2011).
- 98 H. Camargo et al., *Thin Solid Films* **528**, 36 (2013).
- 99 J. C. G. Bünzli, G. R. Choppin (Eds), *Lanthanide Probes in Life, Chemical and Earth Sciences - Theory and Practice*, Elsevier, Amsterdam, 1989.
- 100 Teixeira K.C. et al., *Journal of Thermal Analysis and Calorimetry* **1**, 2011.
- 101 R. S. Carvalho et al., *Applied Physics Letters* **108**, p. 203303, 2016.

6

Apêndice 1

A pesquisa conduzida durante este doutorado permitiu desenvolver um protótipo de sensor magnético utilizando o efeito OMAR. O protótipo consiste de um circuito analógico capaz de alimentar o dispositivo orgânico e coletar a variação da sua corrente na presença de campo magnético externo devido ao efeito magnetorresistência orgânica.

As figuras 6.1 e 6.2 apresentam o esquema elétrico e o desenho do circuito impresso, respectivamente, do protótipo. A figura 6.3 apresenta a foto do protótipo.

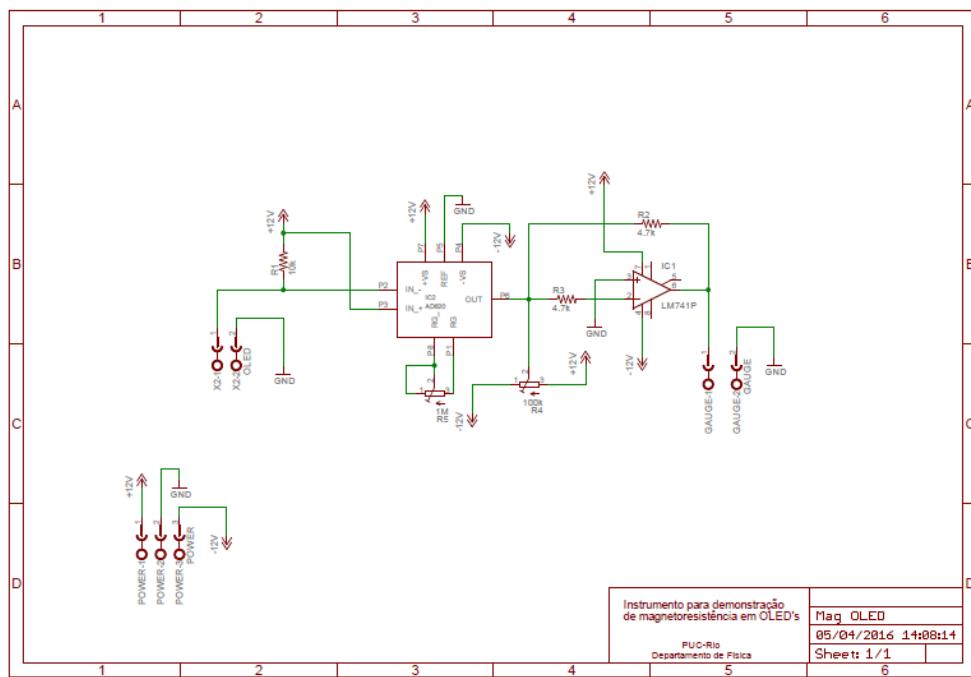


Figura 6.1 – Esquema elétrico do circuito utilizado no protótipo construído.

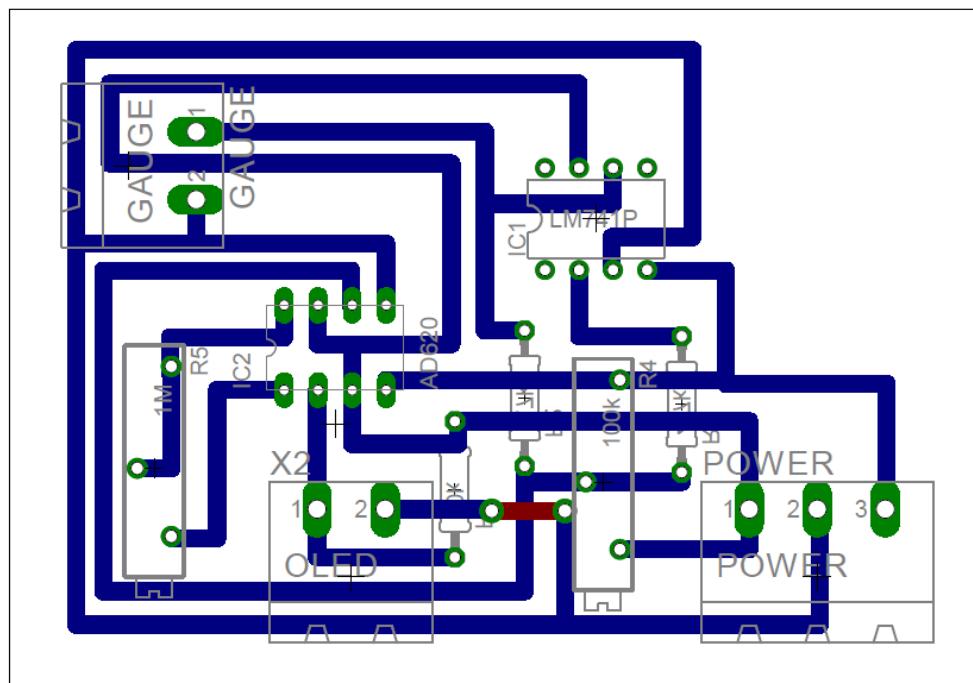


Figura 6.2 – Desenho do circuito impresso do protótipo de sensor de campo magnético desenvolvido.

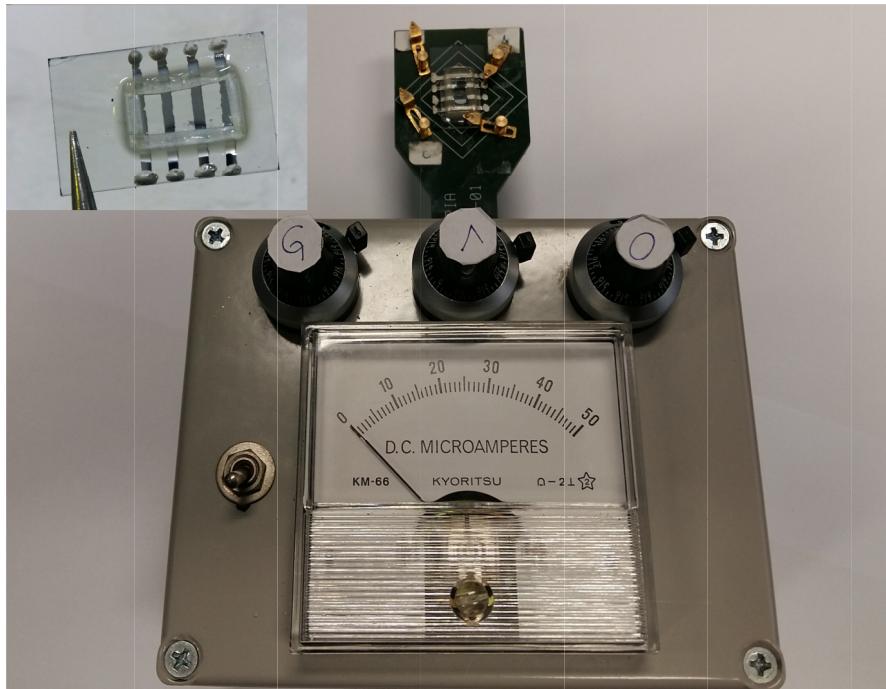


Figura 6.3 - Foto do circuito analógico do protótipo de sensor de campo magnético baseado no efeito de magnetoresistência orgânica.