

## List of publications

### Review Chapter:

Abu Bakar Md. Ismail, " Light-Addressable Potentiometric Sensor, LAPS", Encyclopedia of Sensors, eds. C.A. Grimes and E.C. Dickey, American Scientific Publishers, 5 (2006) 263 - 284.

### Journal:

1. Abu Bakar Md. *Ismail*, Rezaul Islam, K. Furuichi, T. Yoshinobu, H. Iwasaki, "Investigation on LaF<sub>3</sub>/Si structure as light-addressable potentiometric Fluoride (F-) sensor", IIUM Engineering Journal, 6 (2005) 39-45.

2. Abu Bakar Md. *Ismail*, Hiroshi Iwasaki, Isao Hirata, Hiroo Iwata, Tetsuo Yukimasa and Hirokazu Sugihara, "Investigation on light-addressable potentiometric sensor as a possible cell-semiconductor Hybrid", Biosensors & Bioelectronics, 18 (2003) 1509 - 1514.

3. Abu Bakar Md. Ismail, K.Furuichi, T. Yoshinobu and H. Iwasaki, "Light-addressable potentiometric Fluoride(F-) sensor", Sensors and Actuators B, 86 (2002) 94-97.

4. Abu Bakar Md. Ismail and Katsunori Shida, "Estimation of electrolytic concentration in aqueous solution with higher accuracy using electromagnetic multi-functional sensing ", Sensors & Actuators A, 102 (2002) 205-209.

5. Abu Bakar Md. Ismail, H. Sugihara, T. Yoshinobu and H. Iwasaki, "A novel low-noise measurement principle for LAPS and its application to faster measurement of pH", Sensors & Actuators B, 74 (2001) 112-116.

6. Abu Bakar Md. Ismail, T. Yoshinobu and H. Iwasaki, "An organic-film/SiO<sub>2</sub> /Si heterostructure as a novel biological interface of a light-addressable potentiometric sensor", Trans. IEEJ-E, 121-E (2001) 94-99.

7. Abu Bakar Md. Ismail, Harada T, Yoshinobu T, Iwasaki H, Schoening M. J, and Lueth H, " Investigation of pulsed laser-deposited Al<sub>2</sub>O<sub>3</sub> as a high pH sensitive layer for LAPS-based biosensing applications" Sensors and Actuators B, 71 (2000) 169-172.

8. Abu Bakar Md. Ismail and Shida K, "Non-contact multisensing technique for the precise measurement of concentration of electrolytic solution", Sensors and Actuators A, 69 (1998) 152-155.

9. Abu Bakar Md. Ismail and Shida K, " Measurement of very low concentration of an electrolytic solution by a non-contact eddy current sensor", Trans. IEE Japan, 118-E (1998) 48-51

10. Abu Bakar Md. *Ismail* and Shida K, " A new contactless inductive sensor for the measurement of concentration of an electrolytic solution", Jap. J. App. Phys., 36 (1997) 6558-6561

### As a co-author:

11. T. Yoshinobu, H. Ecken, Abu Bakar Md. Ismail, H. Iwasaki, H. Lueth and M. J. Schoening, "Chemical Imaging Sensor and its Application to Biological Systems", Electrochimica Acta, 47 (2001) 259-263.

12. Isao Hirata, Hiroo Iwata, Abu Bakar Md. Ismail, Hiroshi Iwasaki, Tetsuo Yukimasa and Hirokazu Sugihara, "Surface Modification of Si<sub>3</sub>N<sub>4</sub>-Coated Silicon Plate for Investigation of Living Cells", Jpn. J. Appl. Phys., 39 (2000) 6441-6442.

13. Iwasaki H , Harada T, Abu Bakar Md. Ismail, and Yoshinobu T, "A novel chemical sensor and its applications" (in Japanese), Materials Integration, 12 (1999)47-50.

14. R. C. Debnath and Abu Bakar Md. Ismail, "Analysis of combinational logic circuit by a computer", J. Bangladesh Electronic Society, 2(1992) 13-16.

#### Reviewed proceedings of conferences:

15. Abu Bakar Md. Ismail and Abdur Rahman, "Non-Contact Sensing of Photoconductance and Minority Carrier Lifetime of Semiconducting Material Using a Simple Eddy Current Technique", Accepted for the proceedings of 2nd Internl Conference on Industrial and Information Systems (ICIIS 2007), Sri Lanka 8 ~ 11 August, 2007
16. Abu Bakar Md. Ismail and Ramesh Sikder, " Influence of Deposition Rate and Annealing on the Capacitance-Voltage (C-V) Characteristics of Laf3/Si Heterostructure To Be Used As A Potentiometric Sensor", National Conf. of Bangladesh Electronic Society , Rajshahi University, Rajshahi, Bangladesh, June 29-30, 2007, pp 97 - 99.
17. Abu Bakar Md. Ismail, "Proposal of a novel light-addressable potentiometric sensor using two-photon-induced photocurrent in nano-porous silicon heterostructure", poster#24, College on Physics of Nano-Devices", 10 - 21 July 2006, Miramare, Trieste, Italy
18. Abu Bakar Md. Ismail, "Detection of Aqueous Fluoride Ion with Light-Addressable Potentiometric Sensor, Poster # 20, World Conference on Physics and Sustainable Development, WCPSD'05, Durban, South Africa, 31 Oct ~ 2 Nov 2005.
19. Abu Bakar Md. Ismail, K. Furuichi, T. Yoshinobu, H. Iwasaki, "Investigation on LaF3 material in a simple structure of Si/LaF3 as a possible light- addressable potentiometric Fluoride (F-) sensor", 2nd Intl. conference on MECHATRONICS, ICOM'05, Kuala Lumpur, Malaysia 10 ~ 12th May, 2005, pp 756-764
20. Abu Bakar Md. Ismail, Hirokazu Sugihara, and Hiroshi Iwasaki, "Improvement of the sensitivity of light-addressable potentiometric sensor for the purpose of measurement of electrical activity of biological cells", Proceedings of the 1st IEEE and IAS sponsored Sensor for Industry conference, SIcon'01, Rosemont, Illinois, USA, 5-7 November, 2001, pp 215-218.
21. Abu Bakar Md. Ismail, T. Yoshinobu, and H. Iwasaki, " A low-noise and low-background measurement principle for the light-Addressable Potentiometric Sensors", EUROPTRODE-5, Lyon, France, April 16-19, 2000, pp 171-172.
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23. Shida K. and Abu Bakar Md. Ismail, "Measurement of Concentration of Electrolytic Solution Based on Novel Non-Contact Multi-Sensing Technique", Proceedings of the 16th IEEE Instrumentation and Measurement Technology Conference, WA4-9036, Venice, Italy, May, 1999, pp.1372 -1376.
24. Abu Bakar Md. Ismail and Shida K, "Application of eddy current principle for the non-contact sensing of low concentration of electrolytic solution", '97 KACC, KEPCO, Seoul, Korea, Oct.17~18, 1997, pp 231- 234.
25. Li De Sheng, Abu Bakar Md. Ismail and Shida K, "Comparison of spiral sensor and comb shaped tactile sensor", 3rd ICEMI '97, Beijing, China, Oct. 14~16, 1997, pp 349-353..

#### Internet Report:

26. Abu Bakar Md. Ismail, " Aspects of present and future industrial electronics ", An internet edition report published by the Asian Technology Information Program, ATIP, Japan and US, Report file name: atip01.037, August 17, 2001

#### Patents:

1. Abu Bakar Md. Ismail and Hiroshi Iwasaki, " Method and instruments for measurement of semiconductor depletion layer", under procedure of registration.
2. Abu Bakar Md. Ismail, Tatsuo Yoshinobu, Hiroshi Iwasaki, " Method and instruments for measurement of semiconductor depletion layer distribution", applied for registration.