

REFERENCES

- AD633 Data Sheet, *Analog Devices, Inc.*, 1999.
- Alexeev V.L., Das S., Finegold D.N., and Asher S.A., Photonic crystal glucose-sensing material for noninvasive monitoring of glucose in tear fluid, *Clin. Chem.*, 50, 2353–2360, 2004.
- Altman DG (1991) Practical statistics for medical research. *London: Chapman and Hall*.
- American Diabetes Association (2014), Diagnosis and classification of Diabetes mellitus. *Diabetes Care*, 37, S81-S90, 2014.
- American Diabetes Association (2014), Standards of medical care in diabetes, *Diabetes Care*, 37(1), S14-S80, 2014.
- American Heart Association (2011), *Understanding blood pressure readings*, 11, January, 2011.
- Amir Orna, Daphna Weinstein, Silviu Zilberman, Malka Less, Daniele Perl-Treves, Harel Primack, Aharon Weinstein, Efi Gabis, Boris Fikhte, Avraham Karasik, Continuous Noninvasive Glucose Monitoring Technology Based on Occlusion Spectroscopy, *J Diabetes Sci. Technol.*, 1(4), 463-469. 2007.
- Animas Glucowatch, *Diabetes Services, Inc.*, 2005.
- Ansari, RR, Bockle, S and Rovati, L, New optical scheme for a polarimetric-based glucose sensor, *Journal of Biomedical Optics*, 9, 103-115, 2004.
- Armitage P, Berry G, Matthews JNS., Statistical methods in medical research. 4th ed. *Blackwell Science.*, 2002.
- Arnold, SA, Harvey, LM, McNeil, B and Hall, JW, Employing Near-Infrared Spectroscopic Methods of Analysis for Fermentation Monitoring and Control, Part 1, Method Development, *BioPharm International*, 2002.
- Arnold M.A., Non-invasive glucose monitoring, *Curr. Opin. Biotechnol.*, 7, 46–49, 1996.
- Assendelft O.W., Spectrophotometry of Hemoglobin Derivates, *Royal Vangorcum Ltd., Assen*, 1970.
- Ballerstadt, R and Schultz, JS, A Fluorescence Affinity Hollow Fiber Sensor for Continuous Transdermal Glucose Monitoring, *Anal. Chem.*, 72, 4185-4192, 2000.
- Bashkatov A.N., Zhestkov D.M., Genina E.A., Immersion clearing of human blood in the visible and near-infrared spectral regions, *Opt. Spectr.*, vol. 98, 2005, 638-646, 2005.
- Bartle, Sherbert, Introduction to real analysis (4th ed.), *John Wiley & Sons*, ISBN 978-0-471-43331-6, 2011.
- Bates, H.M., *Laboratory Management*, 16, 1978.
- Beckers Ingeborg, Spectral response of glucose: spectral response within optical window of tissue, *ANDOR an Oxford Instruments company*, 2013.

- Benyon, S, Metabolism and Nutrition, *Elsevier Science Ltd, London*, 1-2, 2003.
- Berger, AJ, Itzkan, I and Feld, MS, Feasibility of measuring blood glucose concentration by near-infrared Raman spectroscopy, *Spectrochimica Acta Part A*, 53, 287-292, 1997.
- Birnbaum Y, Luo H, Nagai T, Fishbein MC, Peterson TM, Li S, Noninvasive In Vivo Clot Dissolution Without a Thrombolytic Drug Recanalization of Thrombosed Iliofemoral Arteries by Transcutaneous Ultrasound Combined With Intravenous Infusion of Microbubbles, *Circulation*, 97,130-134, 1998.
- Bill Jelen, Excel 2013 In Depth, *Que Publishing*, 2013.
- Bina, DM, Anderson, RL, Johnson, ML, Bergenstal, RM and Kendall, DM, Clinical Impact of Prandial State, Exercise, and Site Preparation on the Equivalence of Alternative-Site Blood Glucose Testing, *Diabetes Care*, 26, 981-985, 2003.
- Bin Zainul Abidin M.T, Rosli M.K.R., Shamsuddin S.A., Madzhi N.K, Abdullah Md., Initial Quantitative Comparison of 940 nm and 950 nm Infrared Sensor Performance for Measuring Glucose Non-invasively, *Proc. of the IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA)*, Kuala Lumpur, Malaysia, 25-27, November, 2013.
- Bland M., An introduction to medical statistics, 3rd ed. *Oxford: Oxford University Press.*, 2000.
- Bland JM, Altman DG., Measuring agreement in method comparison studies. *Statistical Methods in Medical Research*, 8, 135-160, 1999.
- Bland JM, Altman DG., Statistical method for assessing agreement between two methods of clinical measurement, *The Lancet*, 307-310, 1986.
- Blank TB, Ruchti TL, Lorenz AD, Monfre SL, Makarewicz MR, Mattu M, Hazen KH: Clinical results from non-invasive blood glucose monitor. *Proc SPIE*, 4624, 1–10, 2002.
- Bockle S., Rovati L., Ansari R.R., Polarimetric glucose sensing using the Brewster-reflection off-eye lens: theoretical analysis, *Proc. SPIE*, 4624,160–164, 2002.
- Boehm Harman-I, Gal A, Raykhman AM, Zahn JD, Naidis E, Mayzel Y, Noninvasive glucose monitoring: a novel approach, *J Diabetes Sci Technol.*, 3(2), 253–260, 2009.
- Boehm Harman-I, Gal A, Raykhman AM, Naidis E, Mayzel Y, Noninvasive Glucose Monitoring: Increasing Accuracy by Combination of Multi-Technology and Multi-Sensors, *J Diabetes Sci Technol.*, 4(3), 583-595, 2010.
- Boer Ian H. de, Bryan Kestenbaum, Tessa C. Rue, Michael W. Steffes, Patricia A. Cleary MS, Mark E. Molitch, et al. , Insulin Therapy, Hyperglycemia, and Hypertension in Type 1 Diabetes Mellitus, for the Diabetes Control and Complications Trial (DCCT)/Epidemiology of Diabetes Interventions and Complications (EDIC) Study Research Group, *Arch Intern Med.*, 168(17),1867-1873, 2008.
- Bookchin RM, Gallop PM, Structure of haemoglobin A1c: nature of the N-terminal beta chain blocking group, *Biochem. Biophys. Res. Commun.* 32 (1), 86–93, 1968.

- Bunn HF, Haney DN, Gabbay KH, Gallop PM., Further identification of the nature and linkage of the carbohydrate in haemoglobin A1c. *Biochem. Biophys. Res. Commun.*, 67 (1), 103–109, 1975.
- Burmeister, JJ, Arnold, MA and Small, GW, Noninvasive blood glucose measurements by near-infrared transmission spectroscopy across human tongues, *Diabetes Technol Ther*, 2, 5-16, 2000.
- Burmeister, JJ and Arnold, MA, Evaluation of Measurement Sites for Noninvasive Blood Glucose Sensing with Near-Infrared Transmission Spectroscopy, *Clin Chem*, 45, 1621-1627, 1999.
- Burmeister, JJ and Arnold, MA, Spectroscopic Considerations for Noninvasive Blood Glucose Measurements with Near Infrared Spectroscopy, *IEEE*, 1998.
- B5B-940-8, Infrared LED 940 nm, *Data sheet of Roithner LaserTechnik*, Vienna, Austria.
- Caduff A, Mueller M, Megej A, Dewarrat F, Suri R. E., Klisic J, Donath M, Zakharov P, Schaub D, Stahel W. A., Talary Mark S., Characteristics of a multisensor system for non invasive glucose monitoring with external validation and prospective evaluation, *Biosensors and Bioelectronics*, 26, 3794–3800, 2011.
- Caduff A, Dewarrat F, Talary M, et al., Non-invasive glucose monitoring in patients with diabetes: a novel system based on impedance spectroscopy, *Biosens Bioelectron.*, 22, 598-604, 2006.
- Caduff A, Hirt E, Feldman Y, Ali Z, Heinemann L. First human experiments with a novel non-invasive, non-optical continuous glucose monitoring system. *Biosens Bioelectron.*, 19(3), 209–217, 2003.
- Caduff A, Talary MS, Mueller M, et al. Non-invasive glucose monitoring in patients with Type 1 diabetes: a multisensor system combining sensors for dielectric and optical characterisation of skin. *Biosens Bioelectron.*, 24(9), 2778–2784, 2009.
- Chandalia H. B., Krishnaswamy P. R, Glycated Haemoglobin. *Current Science*, 83 (12), 1522 1532, 2002.
- Chen CS, Wang KK, Jan MY, et al., Noninvasive blood glucose monitoring using the optical signal of pulsatile microcirculation: a pilot study in subjects with diabetes. *J Diabetes Complications*, 22, 371-376, 2008.
- Chen, W, Liu, R, Xu, K and Wang, RK, Influence of contact state on NIR diffuse reflectance spectroscopy in vivo, *Journal of Physics D: Applied Physics*, 38, 2691-2695, 2005.
- Choleau, C, Dokladal, P, Klein, J-C, Ward, WK, Wilson, GS and Reach, G, Prevention of Hypoglycemia Using Risk Assessment With a Continuous Glucose Monitoring System, *Diabetes*, 51, 3263-3273, 2002.
- Cho O.K., Kim Y.O., Mitsumaki H., Kuwa K., Noninvasive measurement of glucose by metabolic heat conformation method, *Clin Chem*, 50, 1894–1898, 2004.

Chowdhury, M.K., Srivastava, A., Sharma, N., Sharma, S., 'Noninvasive blood glucose measurement utilizing a newly designed system based on modulated ultrasound and infrared light', *International Journal of Diabetes in Developing Countries; Springer*, 1-10, December 2015.

Chowdhury, M.K., Srivastava, A., Sharma, N., Sharma, S., Neeraj Sharma, Prospective Analysis of Developing Noninvasive Blood Glucose Monitoring Biosensors for Diabetic Population, *Bioscience Biotechnology Research Asia*, Vol. 11(3), 1639-1647, 2014.

Chowdhury, M.K., Srivastava, A., Sharma, N., Sharma, S., 'Challenges & Countermeasures in Optical Noninvasive Blood Glucose Detection', *International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)*, Vol.2, Issue 1, 324-329, Jan 2013.

Clarke W. L., Gonder-Frederick L. Carter A., W., Pohl S. L., Evaluating clinical accuracy of systems for self-monitoring of blood glucose, *Diabetes Care*, 10(5), 622–628, 1987.

Clarke W. L., Kovatchev B., Continuous Glucose Sensors: Continuing Questions about Clinical Accuracy, *Journal of Diabetes Science and Technology*, 1 (5), 669-675, 2007.

Coakley W.T, Ultrasonic separations in analytical biotechnology, *Trends in Biotechnology*, 15, 506-511, 1997.

Cornbleet PJ, Gochman N., Incorrect least-squares regression coefficients in method-comparison analysis. *Clinical Chemistry*, 25, 432-438, 1979.

Collins PM., Carbohydrates. *Chapman and Hall, London*, 1987.

Cote, D and Vitkin, IA, Balanced detection for low-noise precision polarimetric measurements of optically active, multiply scattering tissue phantoms, *Journal of Biomedical Optics*, 9, 213-220, 2004.

Cote G.L., Fox M.D., Northrop R.B., Noninvasive optical polarimetric glucose sensing using a true phase technique, *IEEE Trans. Biomed. Eng.*, 39(7), 752–756, 1992.

Danaei G., Finucane M. M., Lu Y., Singh G. M., Cowan M. J., Paciorek C. J., Lin J. K., Farzadfar F., Khang Y. H., Stevens G. A., Rao M., Ali M. K., Riley L. M., Robinson C. A., and Ezzati M., National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2·7 million participants, *Lancet*, 31, 378, 2011.

Duck FA., Physical Properties of Tissue: a Comprehensive Reference Book. *Academic Press Inc.*, San Diego, 1990.

Duncan, A, Hannigan, J, Freeborn, SS, Rae, PW, McIver, B, Greig, F, Johnston, EM, Binnie, DT and MacKenzie, HA, A Portable Non-invasive Blood Glucose Monitor, *The 8th International Conference On Solid-State Sensors And Actuators And Eurosensors IX*, 1995.

The Diabetes Control and Complications Trial Research Group (DCCT), The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-independent diabetes mellitus, *N Engl J Med.*, 329 (14), 977–86, 1993.

- Ediger MN, Olson BP, Maynard JD., Noninvasive optical screening for diabetes. *J Diabetes Sci Tech.*, **3**, 776–780, 2009.
- Enejder A.M.K., Sccecina T.G., Oh J., Hunter M., Shih W.C., Sasic S., Horowitz G.L., Feld M.S., Raman spectroscopy for noninvasive glucose measurements, *J.Biomed. Opt.*, **10**, 031114, 2005.
- Esenaliev R.O., Larin K.V., Larina I.V., et al., Noninvasive monitoring of glucose concentration with optical coherence tomography, *Opt. Lett.*, **26**, 992–994, 2001.
- EPD-1300-5.3, Infrared Detector, *Data sheet of Roithner LaserTechnik*, Vienna, Austria.
- Facchinetto A, Sparacino G, and Cobelli C, Reconstruction of Glucose in Plasma from Interstitial Fluid Continuous Glucose Monitoring Data: Role of Sensor Calibration, *J Diabetes Sci Technol.*, **1**(7), 617-627, 2007.
- Fatemi M., Greenleaf J. F., Vibro-acoustography: An imaging modality based on ultrasound stimulated acoustic emission, *Proc. Natl. Acad. Sci. U.S.A.*, **96**, 6603–6608, 1999.
- Filipovský J, Ducimetière P, Eschwége E, Richard JL, Rosselin G, Claude JR., The relationship of blood pressure with glucose, insulin, heart rate, free fatty acids and plasma cortisol levels according to degree of obesity in middle-aged men, *J Hypertens.*, Feb, **14**(2), 229-235, 1996.
- Fujimoto, JG, Optical Coherence Tomography: Introduction, Handbook of Optical Coherence Tomography, Eds.: b. E. Bouma and G. J. Tearney), *Marcel Dekker, Inc*, New York, 1-3, 2002.
- Flock ST, Jacques SL, Wilson BC., Star WM, Van Gemert MJC, Optical Properties of Intralipid: A phantom medium for light propagation studies, *Lasers in Surgery and Medicine*, **12**, 510-519, 1992.
- Frenzel L.E Jr. (Editor), Principles of Electronics Communications Systems, Third Edition, *The McGraw-Hill Companies*, Chapter 3, 93-117, 2008.
- Gabbay RA, Sivarajah S., Optical coherence tomography based continuous noninvasive glucose monitoring in patients with diabetes, *Diabetes Technol Ther.*, **10**, 188-193, 2008.
- Gandrud, LM, Paguntalan, HU, Van Wyhe, MM, Kunselman, BL, Leptien, AD, Wilson, DM, Eastman, RC and Buckingham, BA, Use of the Cygnus GlucoWatch biographer at a diabetes camp, *Pediatrics*, **113**, 108-111, 2004.
- Gebhart, S, Faupel, M, Fowler, R, Kapsner, C, Lincoln, D, McGee, V, Pasqua, J, Steed, L, Wangsness, M, Xu, F and Vanstory, M, Glucose sensing in transdermal body fluid collected under continuous vacuum pressure via micropores in the stratum corneum, *Diabetes Technol Ther.*, **5**, 159-166, 2003.
- Goldsmith LA., Physiology, Biochemistry and Molecular Biology of the Skin. 2nd edition, *Oxford University Press*, 1991.
- Gourzi M, Rouane A, Guelaz R, et al. Non-invasive glycaemia blood measurements by electromagnetic sensor: study in static and dynamic blood circulation. *J Med Eng Technol.*, **29**(1), 22–26, 2005.

- Greenslade T.B., Experiments with ultrasonic transducers, *Physical Teacher*, 32 (October), 392-397, 1994.
- Guevara E., Gonzalez F. J., Joint optical-electrical technique for noninvasive glucose monitoring, *Revista Mexicana De Fisica*, 56(5), 430-434, 2010.
- Guevara E., Gonzalez F. J., Prediction of Glucose Concentration by Impedance Phase Measurements, in *MEDICAL PHYSICS: Tenth Mexican Symposium on Medical Physics, Mexico City (Mexico)*, 1032, 259-261, 2008.
- Hathout, E. Patel, N, Southern, C, Hill, J, Anderson, R, Sharkey, J, Hadley-Scofield, M, Tran, L, Leptien, A, Lopatin, M, Wang, B, Mace, J and Eastman, R, Home use of the GlucoWatch G2 biographer in children with diabetes, *Pediatrics*, 115, 662-666, 2005.
- Holman Rury R., Paul S. K., Bethel M. A, H. A. W. Neil, and David R. M, Long-Term Follow-up after Tight Control of Blood Pressure in Type 2 Diabetes, *N Engl. J Med.*, 359, 1565-1576, 2008.
- Hariri Ali, Wang Le Yi., Identification and low-complexity regime-switching-insulin control of type I diabetic patients, *J. Biomedical Science and Engineering*, 4, 297-314, 2011.
- Heise, HM, Bittner, A and Marbach, R, Clinical chemistry and near infrared spectroscopy: technology for non-invasive glucose monitoring, *Journal of Near Infrared Spectroscopy*, 6, 349–359, 1998.
- Heise, HM, Bittner, A and Marbach, R, Near-infrared reflectance spectroscopy for noninvasive monitoring of metabolites, *Clin Chem Lab Med*, 38,137-145, 2000.
- Heise, HM and Lampen, P, Transcutaneous glucose measurements using near-infrared spectroscopy: validation of statistical calibration models, *Diabetes Care*, 23, 1208-1210, 2000.
- Heise, HM, Marbach, R, Janatsch, G and Kruse-Jarres, JD, Multivariate determination of glucose in whole blood by attenuated total reflection infrared spectroscopy, *Anal Chem*, 61, 2009-2015, 1989.
- Heise, HM and Marbach, R, Human oral mucosa studies with varying blood glucose concentration by non-invasive ATR-FT-IR-spectroscopy, *Cell Mol Biol (Noisy-le-grand)*, 44, 899-912, 1998.
- Heise, HM, Non-invasive monitoring of metabolites using near infrared spectroscopy: state of the art, *Horm Metab Res*, 28, 527-534, 1996.
- Heise, HM, Technology for Non-Invasive Monitoring of Glucose, *18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society* (Amsterdam), 1996.
- Hidalgo J. I., Colmenar M. J., Risco-M. J. L., Maqueda E., Botella M., Rubio J.A., Infante A.C., Garnica O., Lanchares J., Clarke and Parkes error grid analysis of diabetic glucose models obtained with evolutionary computation, *In Proceedings of the 2014 conference companion on Genetic and evolutionary computation companion (GECCO Comp '14)*, ACM, New York, NY, USA, 1305-1312, 2014.

- Hill B., Accu-Chek Advantage: Electrochemistry for Diabetes Management, *Current Separations*, 2014.
- Hillier TA, Abbott RD, Barrett EJ. Hyponatremia: evaluating the correction factor for hyperglycemia. *Am J Med.*, 106(4), 399–403, 1999.
- Huang, D, Swanson, EA, Lin, CP, Schuman, JS, Stinson, WG, Chang, W, Hee, MR, Flotte, T, Gregory, K, Puliafito, CA and et al., Optical coherence tomography, *Science*, 254,1178-1181,1991.
- Huisman TH, Martis EA, Dozy A, Chromatography of hemoglobin types on carboxymethylcellulose. *J.Lab. Clin. Med.* 52 (2): 312–327, 1958.
- Iiya Fine, Glucose correlation with light scattering patterns, Chapter 9, Valery V. Tuchin (Editor.), Handbook of Optical Sensing of Glucose in Biological Fluids and Tissues, CRC Press, Taylor & Francis Group,6000 Broken Sound Parkway NW, Suite 300 Boca Raton, FL 33487-2742, 237-280, 2009.
- International Diabetes Federation, IDF Diabetes Atlas, 6th edn. Brussels, Belgium: *International Diabetes Federation*, 2013. <http://www.idf.org/diabetesatlas>.
- ISO 15197. In vitro diagnostic test systems--requirements for blood glucose monitoring systems for self-testing in managing diabetes mellitus. Geneva, Switzerland: *International Organization for Standardization*; 2013.
- ISO 15197. In vitro diagnostic test systems--requirements for blood glucose monitoring systems for self-testing in managing diabetes mellitus. Geneva, Switzerland: *International Organization for Standardization*; 2006.
- ISO 15197. In vitro diagnostic test systems--requirements for blood glucose monitoring systems for self-testing in managing diabetes mellitus. Geneva, Switzerland: *International Organization for Standardization*; 2003.
- Jeckelmann, J and Seibold, A, GlucOnline - a new approach to continuous glucose monitoring, *Diabetes profile*, 2002.
- Kayashima S, Arai T, Kikuchi M, Sato N, Nagata N, Takatani O, Ito N, Kimura J, Kuriyama T, Kaneyoshi A., New noninvasive transcutaneous approach to blood glucose monitoring: successful glucose monitoring on human 75 g OGTT with novel sampling chamber, *IEEE Trans Biomed Eng.*, Aug, 38(8), 752-757, 1991.
- Kelly, JJ, Kelly, KA and Barlow, CH, Tissue temperature by near-infrared spectroscopy, *Optical Tomography, Photon Migration, and Spectroscopy of Tissue and Model Media: Theory, Human Studies, and Instrumentation* 1995, 818-828, 1995.
- Khalil OS., Non-invasive monitoring of diabetes; Specificity, compartmentalization and calibration issues, in Advances in Fluorescence, C. Geddes Editor, *Kulwar Publications*, 11, 157–188, 2006.
- Khalil OS., Non-invasive glucose measurement technologies: an update from 1999 to the dawn of the new millennium, *Diabetes Technology and Therapeutics*, 6(5), 660–697, 2004.

- Khalil OS., Noninvasive photonic-crystal material for sensing glucose in tears. *Clin Chem.*, 50(12), 2236–2237, 2004.
- Khalil OS., Yeh S J, Lowery M. G., et al., Temperature modulation of the visible and near infrared absorption and scattering coefficients of intact human skin, *J. Biomed. Opt.*, 8, 191–205, 2003.
- Khalil, OS., Spectroscopic and Clinical Aspects of Noninvasive Glucose Measurements, *Clin Chem.*, 45, 165-177, 1999.
- Kim, YJ, Hahn, S and Yoon, G, Determination of glucose in whole blood samples by mid-infrared spectroscopy, *Appl Opt*, 42, 745-749, 2003.
- King L.V., On the acoustic radiation pressure on spheres, *Proceedings of the Royal Society of London*, A147, 212–240, 1934.
- Kinnunen M, Myllyla R. Application of optical coherence tomography, pulsed photoacoustic technique, and time-of-flight technique to detect changes in the scattering properties of a tissue-simulating phantom, *J. Biomed. Opt.*, 13(2), 024005, 2008.
- Kinnunen, M and Myllyla, R, Effect of glucose on photoacoustic signals at wavelengths of 1064 and 532nm in pig blood and intralipid, *Journal of Physics D: Applied Physics*, 38, 2654-2661, 2005.
- Kinnunen, M, Myllyla, R, Jokela, T and Vainio, S, In vitro studies toward noninvasive glucose monitoring with optical coherence tomography, *Appl Opt*, 45, 2251-2260, 2006.
- Klonoff David C., Lias Courtney, Vigersky Robert, Clarke William, Parkes Joan Lee, Sacks David B., Kirkman M. Sue, Kovatchev Boris, and the Error Grid Panel, The Surveillance Error Grid, *Journal of Diabetes Science and Technology*, 1–15, 2014.
- Koenig RJ, Peterson CM, Jones RL, Saudek C, Lehrman M, Cerami A, Correlation of glucose regulation and hemoglobin A1c in diabetes mellitus, *N. Engl. J. Med.* 295 (8), 417–420, 1976.
- Kohl M., Esseupreis M., Cope M., The influence of glucose concentration upon the transport of light in tissue- simulating phantoms, *Phys. Med. Biol.*, 40, 1267-1287, 1995.
- Kohl M., M. Cope, M. Essenpreis, D. Böcker, Influence of Glucose Concentration on Light Scattering in Tissue- Simulating Phantoms, *Opt. Lett.*, 19, 2170–2172, 1994.
- Konig K., Multiphoton microscopy in life sciences, *Journal of Microscopy*, 200(2), 83-104. 2000.
- Koolman, J and Roehm, KH, *Color Atlas of Biochemistry*, 2nd Edition, Thieme, Stuttgart, New York, 35-36, 2005.
- Kost G.J, Tran N.K, Louie R.F, Gentile N, Nicole l. Gentile B.S, Abad J.V, Assessing the Performance of Handheld Glucose Testing for Critical Care, *Diabetes Technology and Therapeutics*, 10(6), 445-451, 2008.
- Krouwer JS., Why Bland-Altman plots should use X, not (Y+X)/2 when X is a reference method, *Statistics in Medicine*, 27, 778-780, 2008.

- Krouwer JS, Monti KL., A simple, graphical method to evaluate laboratory assays. *Eur J Clin Chem Clin Biochem*, 33, 525-527, 1995.
- Kulcu, E, Tamada, JA, Reach, G, Potts, RO and Lesho, MJ, Physiological Differences Between Interstitial Glucose and Blood Glucose Measured in Human Subjects, *Diabetes Care*, 26, 2405-2409, 2003.
- Kulkarni, O.C, Mandal, P., Das, S.S., Banerjee, S., A Feasibility study on Noninvasive Blood Glucose Measurement Using Photoacoustic Method, *4th International Conference on Bioinformatics and Biomedical Engineering (iCBBE)*, 1-4, 18-20 June, 2010.
- Kumar PR, Bhansali A, Ravikiran M, Bhansali S, Dutta P, Thakur JS, Sachdeva N, Bhadada SK, Walia R, Utility of glycated hemoglobin in diagnosing type 2 diabetes mellitus: a community-based study. *J Clin Endocrinol Metab*, 95(6), 2832–2835, 2010.
- Kurnik RT, Oliver JJ, Waterhouse SR, et al., Application of the Mixtures of Experts algorithm for signal processing in a noninvasive glucose monitoring system. *Sensors and Actuators B: Chemical*, 60, 19-26, 1999.
- Lambert, J, Storrie-Lombardi, M and Borchert, M, Measurement of Physiologic Glucose Levels Using Raman Spectroscopy in a Rabbit Aqueous Humor Model, *IEEE*, 1998.
- Lam, Chak Hing., Clinical evaluation of noninvasive blood glucose measurement by using Near Infrared spectroscopy via inter and intra subject analysis, PhD Thesis, *School of Nursing, The Hong Kong Polytechnic University*, Hong Kong, 1-53, September, 2008.
- Larin K.V., Eledrisi M.S., Motamed M., Esenaliev R.O., Noninvasive blood glucose monitoring with optical coherence tomography: a pilot study in human subjects, *Diabetes Care*, 25, 2263–2267, 2002.
- Larin K.V., Motamed M., Ashitkov T.V., and Esenaliev R.O., Specificity of noninvasive blood glucose sensing using optical coherence tomography technique: a pilot study, *Phys. Med. Biol.*, 48, 1371–1390, 2003.
- Leboulanger, B, Guy, RH and Delgado-Charro, MB, Reverse iontophoresis for non-invasive transdermal monitoring, *Physiol Meas*, 25, R35-50, 2004.
- Lee S, Nayak V, Dodds J, Pishko M, Smith NB. Glucose measurements with sensors and ultrasound. *Ultrasound Med Biol*, 31(7), 971–977, 2005.
- Li-Na Li, Qing-Bo Li, Guang-Jun-Zhang, A weak signal extraction method for human blood glucose noninvasive measurement using near infrared spectroscopy, *J Infrared Milli Terahz Waves*, 30, 1191-1204, 2009.
- Lipson J, Bernhardt J, Block U, Freeman W. R., Hofmeister R, Hristakeva M, B.S., Lenosky T, McNamara R, Petrasek D, Veltkamp D, and Waydo S, Requirements for Calibration in Noninvasive Glucose Monitoring by Raman Spectroscopy, *Journal of Diabetes Science and Technology*, Volume 3, Issue 2, 2009, 233-241, 2009.

- Liu, R, Chen, W, Gu, X, Wang, RK and Xu, K, Chance correlation in non-invasive glucose measurement using near-infrared spectroscopy, *Journal of Physics D: Applied Physics*, 38, 2675-2681, 2005.
- Lyandres, O, Shah, NC, Yonzon, CR and Walsh Jr., JT, Real-Time Glucose Sensing by Surface-Enhanced Raman Spectroscopy in Bovine Plasma Facilitated by a Mixed Decanethiol/Mercaptohexanol Partition Layer, *Analytical Chemistry*, 2005,A.F.
- MacKenzie, HA, Ashton, HS, Spiers, S, Shen, Y, Freeborn, SS, Hannigan, J, Lindberg, J and Rae, P, Advances in photoacoustic noninvasive glucose testing, *Clin Chem*, 45, 1587-1595, 1999.
- Martin, WB, Mirov, S and Venugopalan, R, Using two discrete frequencies within the middle infrared to quantitatively determine glucose in serum, *Journal of Biomedical Optics*, 7, 613-617, 2002.
- McGarraugh, G, Price, D, Schwartz, S and Weinstein, R, Physiological influences on off-finger glucose testing, *Diabetes Technol Ther*, 3, 367-376. 2001.
- Malchoff, CD, Shoukri, K, Landau, JI and Buchert, JM, A novel noninvasive blood glucose monitor, *Diabetes Care*, 25, 2268-2275, 2002.
- Marbach R. and Heise H.M., Optical diffuse reflectance accessory for measurements of skin tissue by near-infrared spectroscopy, *Applied Optics*, 34, 610–621, 1995.
- Marbach, R, Koschinsky, Th, Gries, FA and Heise, HM, Noninvasive Blood Glucose Assay by Near-Infrared Diffuse Reflectance Spectroscopy of the Human Inner Lip, *Applied Spectroscopy*, 47, 875-881, 1993.
- Maruo, K, Chin, J and Tamura, M, Noninvasive Blood Glucose Monitoring by Novel Optical Fiber Probe, *Optical Diagnostics and Sensing of Biological Fluids and Glucose and Cholesterol Monitoring II*, 2002.
- Maruo, K, Tsurugi, M, Chin, J, Ota, T, Arimoto, H and Yamada, Y, Noninvasive Blood Glucose Assay Using a Newly Developed Near-Infrared System, *Journal of Selected Topics in quantum Electronics*, 9, 322-330,2003.
- Maruo, K, Tsurugi, M, Tamura, M and Ozaki, Y, In vivo noninvasive measurement of blood glucose by near-infrared diffuse-reflectance spectroscopy, *Appl Spectrosc*, 57, 1236-1244,2003.
- McClung Melanie J., Calibration Methodology for a Microwave Non-Invasive Glucose Sensor, *Master's Thesis, Baylor University*, Texas, May, 2008.
- McCreery, RL, Raman Spectroscopy for Chemical Analysis, Chemical Analysis, (Ed. J. D. Winefordner), *John Wiley & Sons*, New York, 15, 2000.
- Meiki, V and Hanaire-Broutin, H, Indication of CGMS (Continuous Glucose Monitoring System) in the functional investigations of adult type 1 diabetic patients., *Diabetes Metab (Paris)*, 27, 618-623, 2001.
- Melikyan H, Danielyan E, Kim SW, et al. Non-invasive in vitro sensing of D-glucose in pig blood. *Med Eng Phys.*, 34(3):299–304, 2012.

- Mendelson Y., Pulse oximetry: Theory and applications for noninvasive monitoring, *Clin. Chem.*, 38, 1601–1607, 1992.
- Mohan V., Shaw, S., and Saboo, B., Current glycemic status and diabetes related complications among type 2 diabetes patients in India: Data from the A1chieve study, *Journal of Association of Physicians of India.*, 61, 12-15, 2013.
- Mohammadi B.L, Klotzbuecher T, Sigloch S, Welzel K, Goddel M, Pieber R.T, Schaupp L, In vivo evaluation of a chip based near infrared sensor for continuous glucose monitoring, *Biosensors and Bioelectronics*, 53, 99-104, 2014.
- Moran GR, Jeffrey KR, Thomas JM, Stevens JR. A dielectric analysis of liquid and glassy solid glucose/water solutions. *Carbohydr Res.*, 328(4), 573–584, 2000.
- Mukaibo, Y, Shirado, H, Konyo, M and Maeno, T, Development of a Texture Sensor Emulating the Tissue Structure and Perceptual Mechanism of Human Fingers, *International Conference on Robotics and Automation* (Barcelona, Spain), 2576-2581,2005.
- Myllyla Risto, Zhao Zuomin and Kinnunen Matti, Pulsed Photoacoustic Techniques and Glucose Determination in Human Blood and Tissue, Chapter 14, Valery V. Tuchin (Editor), Handbook of Optical Sensing of Glucose in Biological Fluids and Tissues, *CRC Press, Taylor & Francis Group*,6000 Broken Sound Parkway NW, Suite 300 Boca Raton, FL 33487-2742, 419-455, 2009.
- Nafie, LA, Theory of Raman Scattering, Vol. a (Eds.: I. R. Lewis and H. G. M. Edwards), *Marcel Dekker, Inc., New York*, 1-2, 2001.
- Narasimham S., Kaila G. and Anand S, Non-invasive glucose monitoring using impedance spectroscopy, *Int. J. Biomed. Eng. Techn.*, 14, 225-232, 2014.
- Nathan, D.M., D.E. Singer, Hurxthal K, and Goodson J.D, The clinical information value of the glycosylated hemoglobin assay, *New Eng.J.Med.* 310, 341–346, 1984.
- Nightingale K. R., Palmeri M. L., Nightingale R. W., and Trahey G. E., On the feasibility of remote palpation using acoustic radiation force, *J. Acoust. Soc. Am.* 110, 625–634, 2001.
- Ozaki Y, Shinzawa H, Maruo K, In Vivo Nondestructive Measurement of Blood Glucose by Near-Infrared Diffuse-Reflectance Spectroscopy, Chapter 8, Valery V. Tuchin (Editor), Handbook of Optical Sensing of Glucose in Biological Fluids and Tissues, *CRC Press, Taylor & Francis Group*,6000 Broken Sound Parkway NW, Suite 300 Boca Raton, FL 33487-2742, 419-455, 2009.
- Ogawa M, Matsumura, Yamakoshi T, Motoi K, Yamakoshi K, A New, Noninvasive in vivo optical blood glucose measurement technique using Near Infrared Radiation (Pulse Glucometry) and a proposal for “Pulse-Hemo-photometry” Blood constituent measurements, Chapter 3, Wu, Jinglong (Editor), *Technological Advancement in Biomedicine for Healthcare Applications*, *IGI-Global*, 18-26, 2012.
- Oliver N. S., Toumazou C., Cass A. E. G. and Johnston D. G., Glucose sensors: a review of current and emerging technology, *Diabetic Medicine*, 26, 197–210, 2009.

- Pai P. P., Sanki P K., Satyabrata S, and Banerjee S, Modelling, Verification, and Calibration of a photo acoustics based continuous noninvasive blood glucose monitoring system, *Review of Scientific Instruments*, 86, 064901, 2015.
- Pandey Megha C., Joshi A. K., Non-Invasive Optical Blood Glucose Measurement', *International Journal of Engineering Research and Applications (IJERA)*, 3(4), 129-131, Jul-Aug, 2013.
- Parkes J.L, Slatin S.L, Pardo S, Ginsberg B.H., A new consensus error grid to evaluate the clinical significance of inaccuracies in the measurement of blood glucose, *Diabetes Care*, 23(8), 1143–1148, 2000.
- Passing H, Bablok W, A new biometrical procedure for testing the equality of measurements from two different analytical methods. Application of linear regression procedures for method comparison studies in *Clinical Chemistry, Part I. J. Clin. Chem. Clin. Biochem.* 21, 709-720, 1983.
- Perry R C, Shankar R R, Fineberg N, McGill J, Baron AD, HbA1c measurement improves the detection of type 2 diabetes in high-risk individuals with non-diagnostic levels of fasting plasma glucose: the Early Diabetes Intervention Program (EDIP). *Diabetes Care*, 24(3), 465–471, 2001.
- Pfutzner A, Caduff A, Larbig M, et al., Impact of posture and fixation technique on impedance spectroscopy used for continuous and noninvasive glucose monitoring. *Diabetes Technol Ther.*, 6, 435-441, 2004.
- Pfutzner A, Klonoff D.C, P Scott, Parkes J.L., Technical Aspects of the Parkes Error Grid, *Journal of Diabetes Science and Technology*, 7(5), 1275-1281, 2013.
- Pickering TG, Hall JE, Appel LJ, Falkner BE, Graves J, Hill MN, Jones DW, Kurtz T, Sheps SG, Roccella EJ, Recommendations for blood pressure measurement in humans and experimental animals, part 1: blood pressure measurement in humans: a statement for professionals from the Subcommittee of Professional and Public Education of the American Heart Association Council on High Blood Pressure Research, *Hypertension*, 45, 142–161, 2005.
- Pickup JC, Hussain F, Evans ND, Rolinski OJ, Birch DJ. Fluorescence-based glucose sensors. *Biosens Bioelectron.*, 20(12):2555–2565, 2005.
- Pitzer, KR, Desai, S, Dunn, T, Edelman, S, Jayalakshmi, Y, Kennedy, J, Tamada, JA and Potts, RO, Detection of hypoglycemia with the GlucoWatch biographer, *Diabetes Care*, 24, 881 885,2001.
- Polevaya Y, Ermolina I, Schlesinger M, Ginzburg BZ, Feldman Y. Time domain dielectric spectroscopy study of human cells. II. Normal and malignant white blood cells. *Biochim Biophys Acta.*, 1419(2), 257–271, 1999.
- Qu, J and Wilson, BC, Monte Carlo modeling studies of the effect of physiological factors and other analytes on the determination of glucose concentration in vivo by near infrared optical absorption and scattering measurements, *Journal of Biomedical Optics*, 2, 319-325,1997.
- Radel S., Brandstetter M., Lendl B., Observation of particles manipulated by ultrasound in close proximity to a cone-shaped infrared spectroscopy probe, *Ultrasonics*, 50, 240–246, 2010.

- Raghavachari, R, Introduction, Near-Infrared Applications in Biotechnology, *Marcel Dekker*, New York, 1-3, 2001.
- Rahbar S, Blumenfeld O, Ranney HM (1969). Studies of an unusual hemoglobin in patients with diabetes mellitus, *Biochem. Biophys. Res. Commun.* 36(5), 838–843, 1969.
- Ramchandani N., Heptulla A R., New technologies for diabetes: a review of the present and the future. *International Journal of Pediatric Endocrinology*, 28, 1-10, 2012.
- Rhee SY, Chon S, Koh G, et al., Clinical experience of an iontophoresis based glucose measuring system. *J Korean Med Sci*, 22, 70-73, 2007.
- Riley, MR and Crider, HM, The effect of analyte concentration range on measurement errors obtained by NIR spectroscopy, *Talanta*, 52, 473,2000.
- Robinson, MR, Eaton, RP, Haaland, DM, Koepp, GW, Thomas, EV, Stallard, BR and Robinson, PL, Noninvasive glucose monitoring in diabetic patients: a preliminary evaluation, *Clin Chem*, 38, 1618-1622, 1992.
- Rosencwaig, A, Photoacoustics and Photoacoustic Spectroscopy, Chemical Analysis, Eds.: P. J. Elving and J. D. Winefordner), *John Wiley & Sons*, New York, 1-84, 1996.
- Ruchti, TL, Thennadil, SN, Blank, TB, Lorenz, A and Monfre, SL, Noninvasive measurement of glucose through the optical properties of tissue, (*Ed. U. S. Patent*), *United States of America*, 2006, <http://www.freepatentsonline.com/6990364.html>.
- Sudheendran N, Mohamed M, Mohamed G, Tuchin V.V, Larin K.V, Assessment of tissue optical clearing as a function concentration using Optical Coherence Tomography, *Journal of Innovative Optical Health Sciences*, 03, 169, 2010.
- Sharma, J.K., Business Statistics, *Pearson Education India*, Second Edition, 454, 2012.
- Schechter, Eric, Handbook of Analysis and Its Foundations, Absolute Values, *Academic Press*, ISBN 0-12-622760-8, 259–263, 1997.
- Shcherbakov M V, Brebels A, Shcherbakova N L, Tyukov A P, Janovsky T A, and Kamaev V A., A Survey of Forecast Error Measures, *World Applied Sciences Journal (Information Technologies in Modern Industry, Education & Society)*, 24, 171-176, 2013.
- Schrader, W, Meuer, P, Popp, J, Kiefer, W, Menzebach, J-U and Schrader, B, Non-invasive glucose determination in the human eye, *Journal of Molecular Structure*, 735-736, 299, 2005.
- Sieg A, Guy RH, Delgado-Charro MB, Noninvasive glucose monitoring by reverse iontophoresis in vivo: application of the internal standard concept. *Clin Chem.*, 50(8), 1383–1390, 2004.
- Siegel R.J. et al., Noninvasive Transcutaneous Low Frequency Ultrasound Enhances Thrombolysis in Peripheral and Coronary Arteries, Echocardiography; *A Jnl. of CV Ultrasound and Allied Tech*, 18(3), 247-257, 2001.
- Sierra, JF, Galban, J and Castillo, JR, Determination of Glucose in Blood Based on the Intrinsic Fluorescence of Glucose Oxidase, *Anal. Chem.*, 69, 1471-1476, 1997.

- Smith, C, Marks, A and Lieberman, M, Basic Medical Biochemistry: A Clinical Approach, *Lippincott William & Wilkins*, Philadelphia, 3-491, 2005.
- So C. F., K. S Choi., Wong T. K.S, J. Chung W.Y., Recent advances in noninvasive glucose monitoring, *Medical Devices: Evidence and Research, Dove Press*, 5, 45-52, 2012.
- Srivastava R, Jayant RD, Chaudhary A, McShane MJ. Smart Tattoo, Glucose Biosensors and Effect of Coencapsulated Anti-Inflammatory Agents. *Journal of Diabetes Science and Technology*, 5(1), 76-85, 2011.
- Staveren HG V, CJM Moes, J Van Marle, SA Prahl, MJC van Gemert, "Light scattering in Intralipid-10% in the wavelength range of 400-1100 nanometers," *Applied Optics* 30, 4507-4514, 1991.
- Suchkova V, Farhan N. Siddiqi, Edwin L. Carstensen, Diane Dalecki, Sally Child and Charles W. Francis, Enhancement of Fibrinolysis With 40-kHz Ultrasound, *Circulation*, 98,1030-1035,1998.
- Suchkova V. N., Baggs R. B. ,Francis C. W. , Effect of 40-kHz Ultrasound on Acute Thrombotic Ischemia in a Rabbit Femoral Artery Thrombosis Model Enhancement of Thrombolysis and Improvement in Capillary Muscle Perfusion, *Circulation*, 101, 2296-2301, 2000.
- Syed IA., Glycated haemoglobin; past, present, and future are we ready for the change. *J Pak Med Assoc*, 61(4), 383–388, 2011.
- Se-yuen, Wave experiments using low-cost 40 kHz ultrasonic transducers, *Physical Education, IOP publishing Ltd.*, 38 (5), 441-446, 2003.
- Tarumi, M, Shimada, M, Murakami, T, Tamura, M, Shimada, M and Yamada, Y, A Monte Carlo Simulation of NIR spectrum Changes Induced by Variations of Glucose Concentration, *Proc. SPIE*, 28-35, 2002.
- Tirtariyadi Ryan, Optical Glucometer Interface-Developing a Data Collecting System for Near-Infrared Bio-sensing Applications, *Electrical & Biomedical Engineering Project Report, McMaster University*, Canada, 2009.
- Tamada JA, Garg S, Jovanovic L, et al., Noninvasive glucose monitoring: comprehensive clinical results. *Cygnus Research Team. JAMA*, 282, 1839-1844,1999.
- Tao D, Adler A. In vivo blood characterization from bioimpedance spectroscopy of blood pooling. *IEEE Trans Instrum Meas.*, 58(11), 3831–3838, 2009.
- Tenhuunen J., Kopola H., Myllyla R., Non-invasive glucose measurement based on selective near infrared absorption: requirements on instrumentation and special range, *Measurement*, (24), 173–177, 1998.
- Tierney, MJ, Transdermal glucose monitoring opens a new age of diabetes management, *IVD Technology*, 2003.
- Tittel, FK, Richter, D and Fried, A, Mid-Infrared Laser Applications in Spectroscopy, *Appl Phys*, 89, 445-516, 2003.

- Trivelli, L.A., Ranney, H.M., Lai, H.T., Hemoglobin components in patients with diabetes mellitus, *New Eng.J.Med.*, 284, 353-357, 1971.
- Tu, AT, Raman Spectroscopy in Biology: Principles & Applications, *John Wiley & Sons*, 7-47, 1982.
- Tuchin V.V (ed.), Handbook of Optical Sensing of Glucose in Biological Fluids and Tissues, *CRC Press, Taylor & Francis Group*, London, 2009.
- Tuchin V.V (ed.), Optical Clearing in Tissues and Blood, PM 154, *SPIE Optical Engineering Press*, Bellingham, WA, 107-146, 2006.
- Tura A., Advances in the development of devices for noninvasive glycemia monitoring: who will win the race?, *Nutritional Therapy and Metabolism*, 28 (1), 33–39, 2010.
- Tura A., Maran A. and Pacini G., “Non-invasive glucose monitoring: Assessment of technologies and devices according to quantitative criteria”, *Diabetes Research and Clinical Practice*, vol. 77, 16-40, 2007.
- Tura A., Noninvasive glycaemia monitoring: background, traditional findings, and novelties in the recent clinical trials, *Curr Opin Clin Nutr Metab Care*, 11, 607-612, 2008.
- Tura A, Sbrignadello S, Cianciavicchia D, Pacini G, Ravazzani P. A low frequency electromagnetic sensor for indirect measurement of glucose concentration: in vitro experiments in different conductive solutions. *Sensors (Basel)*, 10(6), 5346–5358, 2010.
- Urban M. W., Fatemi M., Greenleaf J F., Modulation of ultrasound to produce multifrequency radiation force, *Acoustical Society of America*, 1228–1238, 2010.
- UK Prospective Diabetes Study Group, *Tight blood pressure control and risk of macro vascular and micro vascular complications in type 2 diabetes: UKPDS 38*, 1998.
- United Kingdom Prospective Diabetes Study (UKPDS), Diabetes Trials Unit. *Oxford University*. <https://www.dtu.ox.ac.uk/ukpds/> (Last Accessed: 21/12/2015)
- Vaddiraju S, Diane J. Burgess, Loannis Tomazos, Faquir C. Jain, and Fotios P, Technologies for Continuous Glucose Monitoring: Current Problems and Future Promises, *J Diabetes Sci Technol.*, 4(6), 1540-62, 2010.
- Valgimigli F, Lucarelli F, Scuffi C, Morandi S, and Sposato I, Evaluating the Clinical Accuracy of GlucoMen®Day: A Novel Microdialysis-based Continuous Glucose Monitor, *Journal of Diabetes Science and Technology*, Volume 4, Issue 5, 1182-1192, September, 2010.
- Vashist Sandeep Kumar, Non-invasive glucose monitoring technology in diabetes management: A review. *Analytica Chimica Acta*, 750, 16– 27, 2012.
- Voigt J, Wendelken M, Driver V, Alvarez OM, Low-frequency ultrasound (20-40) kHz as an adjunctive therapy for chronic wound healing: a systematic review of the literature and meta-analysis of eight randomized controlled trials, *Int J Low Extrem Wounds*, Dec, 10(4), 2011.

- Wan, Q, Cote, GL and Brandon, DJ, Dual-wavelength polarimetry for monitoring glucose in the presence of varying birefringence, *Journal of Biomedical Optics*, 10, 024029-024021-024028, 2005.
- Ward, Electrical Engineering Science, *McGraw-Hill*, 141–142, 1971.
- Watkins P. J., ABC of Diabetes, (Fifth Edition), London: *BMJ Books*, 2003.
- Wentholt I.M.E., Hart A.A.M., Hoekstra J.B.L. and Devries J.H., How to Assess and Compare the Accuracy of Continuous Glucose Monitors? *Diabetes Technology & Therapeutics*, volume 10, number 2, 57-68, 2008.
- Weiss R, Yegorichikov Y, Shusterman A, Raz I. Noninvasive continuous glucose monitoring using Photoacoustic technology: results from the first 62 subjects. *Diabetes Technol Ther.*, 9, 68-74, 2007.
- Weinzimer SA., Pendra: the once and future noninvasive continuous glucose monitoring device? *Diabetes Technol Ther.*, 6, 442-444, 2004.
- Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: estimates for the year 2000 and projections for 2030, *Diabetes Care*, 27(5), 1047-1053, 2004.
- Wilson D, Braunwald E Isselbacher K I, Petersdorf R G, Manin J B, Fauci A S and Root R K (ed), Harrison's Principals of Internal Medicine 12th edn., New York: *McGraw-Hill*, 1991.
- Yadav, J., Rani, A., Singh, V., Murari, B.M., "Near-infrared LED based non-invasive blood glucose sensor," *2014 International Conference on Signal Processing and Integrated Networks (SPIN)*, pp.591-594, 20-21 Feb. 2014.
- Yadav J, Rani A, Singh V, Murari B M, Prospects and limitations of non-invasive blood glucose monitoring using near-infrared spectroscopy, *Biomedical Signal Processing and Control*, 18, 214–227, 2015.
- Yamakoshi Y, Ogawa M, Tamura T, Multivariate Regression and Classification Models for Estimation of Blood Glucose Levels using a New Noninvasive Optical Measurement Technique Named “Pulse-Glucometry”, *The Open Optics Journal*, 3, 63-69, 2009.
- Yamakoshi K., Yamakoshi Y., Pulse Glucometry: A New Approach for Non-invasive Blood Glucose Measurement Using Instantaneous Differential Near Infrared Spectrophotometry, *Journal of Biomedical Optics*, 11(5), 1-11, (September/October), 2006.
- Yeh S J, Kantor S., Hanna C. F., et al., Calculated calibration models for glucose in cutaneous tissue from temperature modulation of localized reflectance measurements, *Proc. SPIE*, 5771, 166–173, 2005.
- Yeh S J, Hanna C. F., Kantor S., et al., Differences in thermal optical response between intact diabetic and nondiabetic human skin, *Proc. SPIE*, 4958, 213–224, 2003.
- Yeh S.J., Hanna C.F., Khalil O.S., Monitoring blood glucose changes in cutaneous tissue by temperature-modulated localized reflectance measurements, *Clin. Chem.*, 49, 924–934, 2003.

- Yonzon C.R., Haynes C.L., Zhang X., Walsh J.T. Jr., Van Duyne R.P., A glucose biosensor based on surface-enhanced Raman scattering: improved partition layer, temporal stability, reversibility, and resistance to serum protein interference, *Anal. Chem.*, 76, 78–85, 2004.
- Yoon Gilwon, Statistical Analysis for Glucose Prediction in Blood Samples by Infrared Spectroscopy, Chapter 4, Valery V. Tuchin (Editor), *Handbook of Optical Sensing of Glucose in Biological Fluids and Tissues*, CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300 Boca Raton, FL 33487-2742, 97-114, 2009.
- Youcef-Toumi, K and Saptari, VA, noninvasive blood glucose analysis using near infrared absorption spectroscopy, *MIT d'Arbeloff Laboratory for Information Systems and Technology*, 1-22, 1999.
- Youcef-Toumi, K and Saptari, VA, Noninvasive Blood Glucose Analysis Using Near Infrared Absorption Spectroscopy, *MIT d'Arbeloff Laboratory for Information Systems and Technology*, 1-7, 2000.
- Zhao Z., Myllyl R., Photoacoustic blood glucose and skin measurement based on optical scattering effect, *Proc. SPIE*, 4707, 153–157, 2002.
- Zhao, Z, Pulsed photoacoustic techniques and glucose determination in human blood and tissue, *Department of Electrical Engineering and Infotech Oulu, University of Oulu*, 101-104, 2002.
- Zhao Z., Pulsed Photoacoustic Techniques and Glucose Determination in Human Blood and Tissue, Doctoral thesis, *University of Oulu, Finland*, 2002.
- Zhu L., Lin J., Lin B., Li H., Noninvasive blood glucose measurement by ultrasound-modulated optical technique, *Chinese Optical Letters*, 11(2), 0217011-0217015, 2013.
- Zhu L., Lin J., Lin B., Li H., New optical method for noninvasive blood glucose measurement by optical ultrasonic modulation, *Proc. SPIE 7845, Optics in Health Care and Biomedical Optics IV*, 784525, November 08, 2011.
- Zilberman S, Kononenko A, Weinstein A, Gabis E, Karasin A, Improved system for noninvasive glucose monitoring at home, *EASD poster*, 932, 2009.