Book Chapters

Yukihiro Ozaki

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1. Y. Ozaki, Two-dimensional near-infrared correlation spectroscopy, in H. W. Siesler, Y. Ozaki, S. Kawata, and M. Heise: Near-Infrared Spectroscopy; Theory, Instruments, and Applications, Wiley-VCH (2002). pp.163-178.
2. Y. Ozaki, Applications in chemistry: H. W. Siesler, Y. Ozaki, S. Kawata, and M. Heise: Near-Infrared Spectroscopy; Theory, Instruments, and Applications, Wiley-VCH (2002).
3. Y. Ozaki: 2D correlation spectroscopy in vibrational spectroscopy, in Handbook of Vibrational Spectroscopy, Vol. 3, J. M. Chalmers and P. R. Griffiths (Eds.) John Wiley & Sons, Chichester, pp. 2135-2172 (2002).
4. Y. Ozaki: 2D Correlation Spectroscopy in Vibrational Spectroscopy, in Handbook of Vibrational Spectroscopy, Vol.3, J. M. Chalmers and P. R. Griffiths, eds. John Wiley & Sons, Chichester, pp. 2135-2172 (2002).
5. Y. Ozaki, Y. Katsumoto, J. H.Jiang, and Y. Liang: Useful and Advanced Information in the Field of Near Infrared Spectroscopy, 1. Spectral analysis in the NIR region, Editor by S. Tsuchikawa, Research Signporst, pp. 1-16 (2003).
6. Y. Ozaki, Y. Katsumoto, J. H. Jiang, and Y. Liang: Useful and Advanced Information in the Field of Near Infrared Spectroscopy, 1. Spectral analysis in the NIR region, Editor by S. Tsuchikawa, Research Signporst, pp. 1-16 (2003).
7. N. Skrebova, K. Aizawa, and Y. Ozaki: Vibrational Spectroscopy for molecular Characterization and Diagnosis of Premalignant and Malignant Skin Tumours, Biotechnol Annu. Rev, 11, 191-225 (2005).
8. N. Skrebova, K. Aizawa, and Y. Ozaki: Vibrational Spectroscopy for molecular Characterization and Diagnosis of Premalignant and Malignant Skin Tumours, Biotechnol Annu. Rev, 11, 191-225 (2005).
9. Y. Ozaki and S. Sasic: 4 Two-Dimensional Correlation Spectroscopy of Biological and Polymeric Materials, in Vibrational Spectroscopy of Biological and Polymeric Materials, M. Braiman and V. Gregoriou (Eds), CRC Press, p.163-214 (2005).
10. T. Itoh, K. Hashimoto, Y. Kikkawa, A. Ikehata, and Y. Ozaki: Chapter 10 Localizd surface plasmon resonance-coupled photo-induced luminescence and surface enhanced Raman scattering from isolated single Ag nanoaggregates, Handai Nanophotonics, II, 197-218 (2006).
11. Y. Du, S. Kasemsumran, J. H. Jiang, and Y. Ozaki: Chapter 35 In Vivo and In Vitro Near-Infrared Spectroscopic Determination of Blood Glucose and Other Biomedical Components with Chemometrics, Handbook of Near Infrared Analysis, Third Edition, D. A. Burns and E. W.

Ciurczak ed., CRC Press, 673-698 (2007).

12. Y. Ozaki, S. Morita, Y. Hirano, and X. Li: Chapter 12, Monolayer on Air/Solid Interfaces: Vibrational Spectroscopy and Atomic Force Microscopy Studies, in Advanced Chemistry of Monolayers at Interfaces, 309-359, T. Imae ed., Elsevier (2007).

13. Y. Ozaki, H. Shinzawa, K. Maruo, Y. P. Du, and S. Kasemsumran: Chapter 8 - In Vivo Nondestructive Measurement of Blood Glucose by Near-Infrared Diffuse-Reflectance Spectroscopy, in Handbook of Optiacl Sensing of Glucose in Biological Fluids and Tissues, CRC Press, 205-236 (2009).

14. T. Itoh, A. Sujith and Y. Ozaki: Surface-Enhanced Raman Scattering Spectroscopy – Electromagnetic Mechanism and Biomedical Applications, Chapter 10 - in Frontier of Molecular Spectroscopy, J. Laane ed., Elsevier, p. 289-320 (2008).

15. Y. Ozaki, S. Sasic: Chapter 1, Introduction to Raman Spectroscopy, in Pharmaceutical Applications of Raman Spectroscopy, p.1-28, S. Sasic ed., John Wiley & Sons (2008).

16. Y. Ozaki and S. Morita: 25 Spectrometers for Infrared Light, in Encyclopedia of Applied Spectroscopy, (ed. D. L. Andrews), Wiley-VCH, Weinheim, pp. 865-886 (2009).

17. H. Sato, Y. Ozaki, J. Jiang, R-Q. Yu and H. Shinzawa: 14. Vibrational Spectroscopy Imaging of Polymers, 263-281, in Raman, Infrared and Near-Infrared Chemical Imaging, Edited by S. Šašic and Y. Ozaki, John Wiley & Sons (2010).

18. Y. Kitahama, M. K. Hossain, Y. Ozaki, T. Itoh, A. Sujith and X. Han: 15. Surface-Enhanced Raman Scattering Imaging: Application and Experimental Approach by Far-Field with Conventional Setup, 285-299, in Raman, Infrared and Near-Infrared Chemical Imaging, Edited by S. Šašic and Y. Ozaki, John Wiley & Sons (2010).

19. L. Lu, Y. Ozaki, A. Eychmüller: Vol. 20, Ordered Porous Metallic Nanostructures, 351-368, in Encyclopedia of Nanoscience and Nanotechnology, Edited by H. S. Nalwa, American Scientific Publishers (2011).

20. Y. Ozaki, A. Ikehata, and H. Shinzawa: Near-Infrared Spectroscopy in Biological Molecules and Tissues, in Encyclopedia of Biophysics, Springer-Verlag (2012).

21. Y. Kitahama, T. Itoh, P. Pienpinijtham, S. Ekgasit, X. X. Han and Y. Ozaki: Biological Applications of SERS Using Functional Nanoparticles, in Functional Nanoparticles for Bioanalysis, Nanomedicine and Bioelectronic Devices, ACS Publications, 9, 181-234 (2013).

22. Y. Morisawa, T. Goto, A. Ikehata, N. Higashi, and Y. Ozaki: Far-Ultraviolet (FUV) Spectroscopy in the Solid and Liquid States, Principle, Instrumentation, and Application of: Encyclopedia of Analytical Chemistry, 1-21(2013).

23. H. Sato, M. Unger, D. Fischer, Y. Ozaki and H. W. Siesler: Characterization of Polymer Blends by Infrared, Near-Infrared, and Raman Imaging Characterization of Polymer Blends in Characterization of Polymer Blends WILEY-VCH, 705-730, vol.2 (2015)

24. Y. Ozaki, Y. Saito, and S. Kawata, Introduction to FUV and DUV spectroscopy, Far- and Deep-Ultraviolet Spectroscopy, Y. Ozaki and S. Kawata eds.: Springer, pp1-16 (2015).
25. Xinlei Yan, Harumi Sato and Y. Ozaki, Raman and tip-enhanced Raman scattering spectroscopy studies of polymer nanocomposites, Spectroscopy of Polymer Nanocomposites, Elsevier, 88-111 (2016).
26. Hideyuki Shinzawa, Daitaro Ishikawa, Mika Ishigaki and Y. Ozaki, Near-infrared Imaging of Polymers; from Basic Science to Industrial Applications, Encyclopedia of Analytical Chemistry, DOI: 10.1002/9780470027318.a9275 (2016).
27. S. Vantasin, S. Uemura, Y. Tanaka, D. Doujima, T. Kaneko, and Y. Ozaki, Tip-enhanced Raman scattering of local nanostructure on large sheet and microisland epitaxial graphene grown on 4H-SiC (0001), Y. Ozaki, G. Schatz, D. Graham, and T. Itoh, eds.: Frontiers of Plasmon Enhanced Spectroscopy, Vol. 2, Y. Ozaki, G. Schatz, D. Graham, and T. Itoh, eds.: ACS Symposium Series, American Chemical Society (2016).
28. S. Vantasin and Y. Ozaki, 3D SERS imaging, Frontiers of Plasmon Enhanced Spectroscopy, Vol. 1, Y. Ozaki, G. Schatz, D. Graham, and T. Itoh, eds.: ACS Symposium Series, American Chemical Society (2016).
29. Y. Wang, B. Zhao, and Y. Ozaki, Exploring he effect of intermolecular hydrogen bonding and the application in label-free enantioselective discriminatiom, Frontiers of Plasmon Enhanced Spectroscopy, Vol. 1, Y. Ozaki, G. Schatz, D. Graham, and T. Itoh, eds.: ACS Symposium Series, American Chemical Society (2016).
30. Yukihiro Ozaki, Christian W. Huck and Krzysztof B. Bec, Near-IR Spectroscopy and Its Applications, Molecular and Laser Spectroscopy: Advances and Applications, V. P. Gupta ed., Elsevier, pp11-38 (2017).
31. Yizhuang Xu, Yukihiro Ozaki, Isao Noda and Young M. Jung, 2D Correlation Spectroscopy and Its Application in Vibrational and Optical Spectroscopy, Molecular and Laser Spectroscopy: Advances and Applications, V. P. Gupta ed., Elsevier, pp217-240 (2017).
32. Krzysztof B, Bec, Justyna Grabska, and Yukihiro Ozaki, Advances in Anharmonic Methods and Their Applications to Vibrational Spectroscopies, Frontiers of Quantum Chemistry, M. Wojcik, B. Kirtman, H. Nakatsuji, Y. Ozaki, eds.: Springer 483-512 (2017).
33. Yusuke Morisawa, Ichiro Tanabe, and Yukihiro Ozaki, Advances in Far-Ultraviolet Spectroscopy in the Solid and Liquid States, Frontiers and Advances in Molecular Spectroscopy, J. Laane ed., 251-286 (2018).
34. Prompong Pienpinijtham and Yukihiro Ozaki, Tip-enhanced Raman scattering in liquid/solution, 45 years enhanced Raman signals - recent developments in plasmon supported Raman spectroscopy, K. Kneipp, Y. Ozaki and Z.-Q. Tian, eds.: World Scientific, 299-322 (2018).
35. S. Vantasin, Y. Okuno, Y. Saito, and Yukihiro Ozaki, Tip-enhanced Raman scattering of

nanocarbons, 45 years enhanced Raman signals - recent developments in plasmon supported Raman spectroscopy, K. Kneipp, Y. Ozaki and Z.-Q. Tian, eds.: World Scientific, 323-360 (2018).

36. Krzysztof B, Bec, Justyna Grabska, Christian Huck, and Yukihiro Ozaki, Quantum Mechanical Simulations of Near-infrared Spectra: Applications in Physical and Analytical Chemistry, Molecular Spectroscopy: A Quantum Chemistry Approach, Y. Ozaki, M. Wojcik, and Juergen Popp, eds.: Wiley-VCH, 353-388 (2019).

37. Kanet Wongravee, Mika Ishigaki, and Yukihiro Ozaki, Chemometrics as a Green Analytical Tool, Challenges in Green Analytical Chemistry, S. Garrigues and M. de la Guardia eds.: Royal Society of Chemistry, 277-336 (2020).

38. Mika Ishigaki and Yukihiro Ozaki, Near Infrared Spectroscopy and Imaging in Protein Research, Y. Ozaki, M. Baranska, I. K. Lednev, and B. R. Wood, eds.: Vibrational Spectroscopy in Protein Research, Elsevier/Academic Press, 143-176 (2020).

39. Y. Ozaki and C. Huck, Introduction in Near-Infrared Spectroscopy, Theory, Spectral Analysis, Instrumentation, and Applications, Y. Ozaki, C. Huck, S. Tsuchikawa, and S. B. Engelsen eds.: Springer, 3-10 (2020).

40. Y. Ozaki and Y. Morisawa, Principles and Characteristics of NIR Spectroscopy, in Near-Infrared Spectroscopy, Theory, Spectral Analysis, Instrumentation, and Applications, Y. Ozaki, C. Huck, S. Tsuchikawa, and S. B. Engelsen eds.: Springer, 11-35 (2020).

41. M. A. Czarnecki, K. B. Bec, J. Grabska, T. S. Hofer, and Y. Ozaki, in Near-Infrared Spectroscopy, Theory, Spectral Analysis, Instrumentation, and Applications, Y. Ozaki, C. Huck, S. Tsuchikawa, and S. B. Engelsen eds.: Springer, 297-330 (2020).

42. Yukihiro Ozaki and Harumi Sato, Polymer Spectroscopy-Spectroscopy from Far-ultraviolet to Far-infrared/Terahertz and Raman Spectroscopy, Spectroscopic Techniques for Polymer Characterization: Methods, Instrumentation, Applications, Yukihiro Ozaki, and Harumi Sato eds., Wiley-VCH (2021).

43. Daitaro Ishikawa, Yuta Hikima, and Yukihiro Ozaki, Near-Infrared Spectroscopy and Imaging of Polymers, Spectroscopic Techniques for Polymer Characterization: Methods, Instrumentation, Applications, Yukihiro Ozaki, and Harumi Sato eds., Wiley-VCH (2021). pp125-163.

44. Meng-Lei Xua, Bing Zhao, and Yukihiro Ozaki; Surface-enhanced Raman scattering (SERS) Sensors for Food Safety, Narayan R. ed. Encyclopedia of Sensors and Biosensors, Vol. 4, Elsevier, pp456-470.

45. Yasutaka Kitahama, Bing Zhao, and Yukihiro Ozaki; Surface-enhanced Raman scattering (SERS) Sensors of Biomedicine and Biomolecules. Narayan R. ed. Encyclopedia of Sensors and Biosensors, Vol. 4, Elsevier, pp441-455.

46. Y. Ozaki, K. Awa, and D. Ishikawa; Chapter 34, Near-infrared Spectroscopy. In

Clarke's Analysis of Drugs and Poisons, Royal Pharmaceutical Society, UK, 2023.

47. M. A. Czarnecki, Y. Morisawa, and Y. Ozaki, Hydrogen bonding from perspective from overtones and combination modes: Near-infrared spectroscopic study, Spectroscopy and Computation of Hydrogen-Bonded Systems, M. J. Wojcik and Y. Ozaki eds.: Wiley-VCH (2023). pp233-260.

48. Y. Morisawa, T. Goto, N. Ueno, and Y. Ozaki, ATR-far-ultraviolet spectroscopy holds unique advantages for investigating hydrogen bondings and intermolecular interactions of molecules in condensed phase. Spectroscopy and Computation of Hydrogen-Bonded Systems, M. J. Wojcik and Y. Ozaki eds.: Wiley-VCH (2023). pp409-434.

49. Y. Ozaki, Histories of challenges of Raman spectroscopy to medical science-from1970s-2000, Raman Spectroscopy in Human Health and Biomedicine, H. Sato, J. Popp. B. Wood, and Y. Ozaki, eds.: World Scientific (2023). pp1-33.

50. H. Sato and Y. Ozaki, Non-destructive analytical and structural studies of lipids in food, health, and biomedical sciences. Raman Spectroscopy in Human Health and Biomedicine, H. Sato, J. Popp. B. Wood, and Y. Ozaki, eds.: World Scientific (2023). pp201-220.

51. P. Pienpinijtham and Y. Ozaki, State-of-the-art tip-enhanced Raman scattering. Surface- and Tip-enhanced Raman Scattring Specroscopy, M. Prochazka, J. Kneipp, B, Zhao, and Y. Ozaki, eds.: Springer (2024). pp117-164.