

***Selected Publications as of March, 2010**

1. Satoshi Kawata, Atsushi Ono, and Prabhat Verma, "Subwavelength colour imaging with metallic nanolens," *Nature Photonics* 2, 438 (2008). [[full text](#)]
2. Satoshi Kawata, Yasushi Inouye, and Prabhat Verma, "Plasmonics for near-field nano-imaging and superlensing," *Nature Photonics* 3, 388 (2009). [[full text](#)]
3. Taka-aki Yano, Prabhat Verma, Yuika Saito, Taro Ichimura, and Satoshi Kawata, "Pressure-assisted tip-enhanced Raman imaging at a resolution of a few nanometers," *Nature Photonics* 3, 473 (2009). [[full text](#)]
4. Norihiko Hayazawa, Masashi Motohashi, Yuika Saito, Hidekazu Ishitobi, Atsushi Ono, Taro Ichimura, Prabhat Verma, and Satoshi Kawata, "Visualization of localized strain of a crystalline thin layer at the nanoscale by tip-enhanced Raman spectroscopy and microscopy," *J. Raman Spectrosc.* 38, 684-696 (2007). [[full text](#)]
5. Norihiko Hayazawa, Hiroyuki Watanabe, Yuika Saito, and Satoshi Kawata, "Towards atomic site-selective sensitivity in tip-enhanced Raman spectroscopy," *J. Chem. Phys.* 125, 244706 (2006). [[full text](#)]
6. Takuo Tanaka, Atsushi Ishikawa, and Satoshi Kawata, "Unattenuated light transmission through the interface between two materials with different indices of refraction using magnetic metamaterials," *Phys. Rev. B* 73, 12, 125423 (2006). [[full text](#)]
7. Atsushi Ono, Jun-ichi Kato, and Satoshi Kawata, "Subwavelength Optical Imaging through a Metallic Nanorod Array," *Phys. Rev. Lett.* 95, 267407 (2005). [[full text](#)]
8. Atsushi Ishikawa, Takuo Tanaka, and Satoshi Kawata, "Negative Magnetic Permeability in the Visible Light Region," *Phys. Rev. Lett.* 95, 237401 (2005). [[full text](#)]
9. Taro Ichimura, Shintaro Fujii, Prabhat Verma, Taka-aki Yano, Yasushi Inouye, and Satoshi Kawata, "Subnanometric near-field Raman investigation in the vicinity of a metallic nanostructure," *Phys. Rev. Lett.* 102, 186101 (2009). [[full text](#)]
10. Norihiko Hayazawa, Kentaro Furusawa, Atsushi Taguchi, Hiroshi Abe, and Satoshi Kawata, "Tip-enhanced two-photon excited fluorescence microscopy with a silicon tip," *Appl. Phys. Lett.* 94, 193112 (2009). [[full text](#)]

List of publications (Apr. 2005 – Mar. 2010)

1. Kentaro Furusawa, Norihiko Hayazawa, and Satoshi Kawata, "Two-beam multiplexed CARS based on a broadband oscillator" *Journal of Raman Spectroscopy*, accepted.
2. Oussama Moutanabbir, Manfred Reiche, Angelika Hähnel, Winfried Erfurth, Ulrich Gösele, Masahi Motohashi, Alvarado Tarun, Norihiko Hayazawa, and Satoshi Kawata, "Nanoscale patterning induced strain redistribution in ultrathin strained Si layers on oxide," *Nanotechnology* 21, 134013 (2010).
3. Alvarado Tarun, Norihiko Hayazawa, and Satoshi Kawata, "Site-Selective Cutting of Carbon Nanotubes by Laser Heated Silicon Tip," *Jpn. J. Appl. Phys.* 49, 025003 (2010).
4. Hidekazu Ishitobi, Issei Nakamura, Norihiko Hayazawa, Zouheir Sekkat, and Satoshi Kawata, "Orientational Imaging of Single Molecules by Using Azimuthal and Radial Polarizations," *J. Phys. Chem. B* 114, 8, 2565-2571 (2010).
5. Norihiko Hayazawa, Kentaro Furusawa, Atsushi Taguchi, and Satoshi Kawata, "One-photon and two-photon excited fluorescence microscopies based on polarization-control: Applications to tip-enhanced microscopy," *J. Appl. Phys.* 106, 113103 (2009).
6. Atsushi Taguchi, Norihiko Hayazawa, Kentaro Furusawa, Hidekazu Ishitobi, and Satoshi Kawata, "Deep-UV tip-enhanced Raman scattering," *J. Raman Spectrosc.*, 40, 1324 (2009).

7. Yuika Saito, Prabhat Verma, Kyoko Masui, Yasushi Inouye and Satoshi Kawata, "Nano-scale Analysis of Graphene Layers by Tip-enhanced Near-field Raman Spectroscopy," *J. Raman Spectrosc.*, **40**, 1434 (2009).
8. N. Hayazawa, A. Tarun, A. Taguchi, and S. Kawata, "Development of Tip-enhanced Near-field Optical Spectroscopy and Microscopy" *Japanese Journal of Applied Physics*, **48**, 08JA02 (2009).
9. Satoshi Kawata, Yasushi Inouye and Prabhat Verma, "Plasmonics for near-field nano-imaging and superlensing," *Nature Photonics*, Vol. 3, pp. 388-394 (2009).
10. Taka-aki Yano, Prabhat Verma, Yuika Saito, Taro Ichimura, and Satoshi Kawata, "Pressure-assisted tip-enhanced Raman imaging at a resolution of a few nanometres," *Nature Photonics*, Vol. 3, pp. 473-477 (2009).
11. Taro Ichimura, Shintaro Fujii, Prabhat Verma, Taka-aki Yano, Yasushi Inouye, and Satoshi Kawata, "Subnanometric near-field Raman investigation in the vicinity of a metallic nanostructure," *Phys. Rev. Lett.*, Vol. 102, 186101 (2009).
12. Yuika Saito, and Prabhat Verma, "Imaging and spectroscopy through plasmonic nano-probe," *Eur. Phys. J. Appl. Phys.*, Vol. 46, 20101 (2009).
13. Katsumasa Fujita, Sawako Ishitobi, Keisaku Hamada, Nicholas I. Smith, Atsushi Taguchi, Yasushi Inouye, and Satoshi Kawata, "Time-resolved observation of surface-enhanced Raman scattering from gold nanoparticles during transport through a living cell," *J. Biomed. Opt.* **14**, 024038 (2009).
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16. Atsushi Taguchi, Norihiko Hayazawa, Yuika Saito, Hidekazu Ishitobi, Alvarado Tarun, and Satoshi Kawata, "Controlling the plasmon resonance wavelength in metal-coated probe using refractive index modification," *Opt. Express* **17**, 8, 6509-6518 (2009).
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26. Thomas Rodgers, Satoru Shoji, Zouheir Sekkat, and Satoshi Kawata, "Selective aggregation of single-walled carbon nanotubes using the large optical field gradient of a focussed laser beam," *Phys. Rev. Lett.* **101**, 127402 (2008).
27. Remo Proietti Zaccaria, Prabhat Verma, Satoshi Kawaguchi, Satoru Shoji, and Satoshi Kawata, "Manipulating full photonic band gaps in two dimensional birefringent photonic crystals," *Opt. Express* **16**, 19, 14812-14820 (2008).
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34. Satoshi Kawata, Atsushi Ono, and Prabhat Verma, "Subwavelength colour imaging with a metallic nanolens," *Nature Photon.* **2**, 7, 438-442 (2008).
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43. Alvarado Tarun, Norihiko Hayazawa, Masashi Motohashi, and Satoshi Kawata, "Highly efficient tip-enhanced Raman spectroscopy and microscopy of strained silicon in nanoscale," *Rev. Sci. Instrum.* **79**, 013706 (2008).
44. Atsushi Ono, Kyoko Masui, Yuika Saito, Takao Sakata, Atsushi Taguchi, Masashi Motohashi, Taro Ichimura, Hidekazu Ishitobi, Alvarado Tarun, Norihiko Hayazawa, Prabhat Verma, Yasushi Inouye, and Satoshi Kawata, "Active Control of the Oxidization of a Silicon Cantilever for the Characterization of Silicon-based Semiconductors," *Chem. Lett.* **37**, 1, 122-123 (2008).
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Books, Proceedings

1. N. Hayazawa and P. Verma, "Nano-analysis of materials using near-field Raman spectroscopy" in *Frontiers in Nanoscience and Nanotechnology*, Anant Narlikar Ed., pp. 364-404 (Oxford University Press, 2010).
2. Luis M. Krause and Jonas T. Walter Eds., "New Research on Nanocomposites," Norihiko Hayazawa and Alvarado Tarun, "Nano-Scale Characterization and Spectroscopy of Strained Silicon," pp. 1-36, (NOVA Publishers, New York, 2009).
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