Refereed Articles

1. Toward experimental observations of induced Compton scattering by high-power laser facilities
   Shuta J. Tanaka, Ryo Yamazaki, Yasuhiro Kuramitsu & Youichi Sakawa
   Progress of Theoretical and Experimental Physics, 063J01 (8pp) (2020), Oxford University Press

2. Efficient acceleration of cylindrical jets: effects of radiative cooling and tangled magnetic field
   Shuta J. Tanaka & Kenji Toma
   Monthly Notices of the Royal Astronomical Society, 494, 338-348 (2020), Oxford University Press

3. Suzaku and Fermi view of the supernova remnant 3C 396
   A. Sezer, et al. (4th out of 7 authors)
   Monthly Notices of the Royal Astronomical Society, 492, 1481-1491 (2020), Oxford University Press

4. Anomalous plasma acceleration in colliding high-power laser-produced plasmas
   T. Morita, et al. (10th out of 23 authors)
   Physics of Plasma, 26, 090702 (6pp) (2019), AIP Publishing

5. Full particle-in-cell simulation of the interaction between two plasmas for laboratory experiments on the generation of magnetized collisionless shocks with high-power lasers
   T. Umeda, et al. (13th out of 15 authors)
   Physics of Plasma, 26, 032303 (8pp) (2019), AIP Publishing

6. Confinement of the Crab Nebula with tangled magnetic field by its supernova remnant
   Shuta J. Tanaka, Kenji Toma, & Nozomu Tominaga
   Monthly Notices of the Royal Astronomical Society, 478, 4622-4633 (2018), Oxford University Press

7. Blocking Metal Accretion onto Population III Stars by Stellar Wind
   Shuta J. Tanaka, Gen Chiaki, Nozomu Tominaga, & Hajime Susa
   The Astrophysical Journal, 844, 137 (11pp) (2017), IOP Publishing

8. On the Radio-emitting Particles of the Crab Nebula: Stochastic Acceleration Model
   Shuta J. Tanaka, & Katsuaki Asano,
   The Astrophysical Journal, 841, 78 (11pp) (2017), IOP Publishing

9. Prospects for Cherenkov Telescope Array Observations of the Young Supernova Remnant RX J1713.7 – 3946
   F. Acero et al. (317th out of 382 authors),
   The Astrophysical Journal, 840, 74 (14pp) (2017), IOP Publishing

10. Broadband Photon Spectrum and its Radial Profile of Pulsar Wind Nebulae
    Wataru Ishizaki, Shuta J. Tanaka, Katsuaki Asano, & Toshio Terasawa,
    The Astrophysical Journal, 838, 142 (14pp) (2017), IOP Publishing

11. Efficiency of Synchrotron Radiation from Rotation-Powered Pulsars
    Shota Kisaka, & Shuta J. Tanaka,
    The Astrophysical Journal, 837, 76 (16pp) (2017), IOP Publishing
12. Wide-band Spectra of Giant Radio Pulses from The Crab Pulsar
Ryo Mikami, Katsuaki Asano, Shuta J. Tanaka, et al.,
The Astrophysical Journal, 832, 212 (25pp) (2016), IOP Publishing

13. A Broadband Emission Model of Magnetar Wind Nebulae
Shuta J. Tanaka,
The Astrophysical Journal, 827, 135 (8pp) (2016), IOP Publishing

14. Avalanche Photon Cooling by Induced Compton Scattering: Higher-Order Kompaneets Equation
Shuta J. Tanaka, Katsuaki Asano, & Toshio Terasawa,
Progress of Theoretical and Experimental Physics 073E01 (14pp) (2015), Oxford University Press

15. Synchrotron X-ray Emission from Old Pulsars
Shota Kisaka, & Shuta J. Tanaka,
Monthly Notices of the Royal Astronomical Society, 443, 2063-2076 (2014), Oxford University Press

16. Constraint on Pulsar Wind Properties from Induced Compton Scattering off Radio Pulses
Shuta J. Tanaka, & Fumio Takahara,
Progress of Theoretical and Experimental Physics 123E01 (24pp) (2013), Oxford University Press

17. Properties of Young Pulsar Wind Nebulae: TeV Detectability and Their Pulsar Properties
Shuta J. Tanaka, & Fumio Takahara,
Monthly Notices of the Royal Astronomical Society, 429, 2945-2952 (2013), Oxford University Press

18. Study of Four Young TeV Pulsar Wind Nebulae with a Spectral Evolution Model
Shuta J. Tanaka, & Fumio Takahara,
The Astrophysical Journal, 741, 40 (14pp) (2011), IOP Publishing

19. A Model of the Spectral Evolution of Pulsar Wind Nebulae
Shuta J. Tanaka, & Fumio Takahara,
The Astrophysical Journal, 715, 1248-1257 (2010), IOP Publishing

20. Molecular Clouds as a Probe of Cosmic-Ray Acceleration in a Supernova Remnant
Yutaka Fujita, Yutaka Ohira, Shuta J. Tanaka, & Fumio Takahara,
The Astrophysical Journal Letters, 707, L179-L183 (2009), IOP Publishing

Conference Proceedings

1. Acceleration of Relativistic Jets with Tangled Magnetic Field
   S. J. Tanaka, and K. Toma
   Proceedings of Yokohama GRB 2019 Oct. 2019

2. Acceleration of relativistic outflows with tangled magnetic field
   S. J. Tanaka, and K. Toma
   (Refereed) Proceedings of High Energy Phenomena in Relativistic Outflows VII. July 2019

3. On the Radio-emitting Particles of the Crab Nebula: Stochastic Acceleration Model
   S. J. Tanaka
   Proceedings of IAU Symposium 337, Manchester, United Kingdom, Sep. 2017

4. Luminosity of synchrotron radiation from outer magnetosphere of pulsars
   S. Kisaka, and S. J. Tanaka
   Proceedings of IAU Symposium 337, Manchester, United Kingdom, Sep. 2017
5. Confinement of Pulsar Wind Nebulae by Their Supernova Remnants and Magnetic Dissipation
   S. J. Tanaka,
   (Refereed) Proceedings of Physics of Neutron Stars 2017, IOP Publishing, Saint Petersburg, Russia, Jul. 2017

6. Luminosity of synchrotron radiation from pulsar magnetosphere
   S. Kisaka, and S. J. Tanaka,
   (Refereed) Proceedings of Physics of Neutron Stars 2017, IOP Publishing, Saint Petersburg, Russia, Jul. 2017

7. Search for the time evolution of the synchrotron X-ray spectrum from youngest Galactic supernova remnant G1.9+0.3 using Suzaku
   A. Sezer, R. Yamazaki, Y. Ohira, S. J. Tanaka, & S. Kisaka,
   (Refereed) Proceedings of Physics of Neutron Stars 2017, IOP Publishing, Saint Petersburg, Russia, Jul. 2017

8. Blocking Metal Accretion onto Low-Mass Population III Stars by Stellar Wind
   S. J. Tanaka, G. Chiaki, N. Tominaga, & H. Susa,
   (Refereed) Proceedings of Origin of Matter and Evolution of Galaxies, AIP Publishing, Daejeon, Korea, Jul. 2017

9. Stellar wind prevents the ISM gas from accreting onto the PopIII stars
   H. Susa, S. J. Tanaka, G. Chiaki, & N. Tominaga,
   Proceedings of Star Formation in Space and Time, Firenze, Italy, Jun. 2017

10. X-ray Emission from Middle-Aged Gamma-Ray Pulsars
    S. Kisaka, & S. J. Tanaka,
    Proceedings of 2014 Fermi Symposium, Nagoya, Japan, Oct. 2014

11. Synchrotron Emission from Old Pulsars
    S. J. Tanaka, & S. Kisaka,
    Proceedings of Suzaku-MAXI 2014, Ehime, Japan, Feb. 2014

12. High Energy Emission from Spherically Symmetric Pulsar Wind Nebulae
    S. J. Tanaka,
    Proceedings of Suzaku-MAXI 2014, Ehime, Japan, Feb. 2014

13. Hard X-ray observations with Suzaku HXD at the time of giant radio pulses from the Crab pulsar
    R. Mikami, T. Terasawa, S. Kisaka, K. Asano, S. J. Tanaka, et al.
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14. Broadband Emission Structure of Pulsar Wind Nebulae
    S. J. Tanaka,
    Proceedings of 33rd International Cosmic Ray Conference, Rio de Janeiro, Brazil, Jul. 2013

15. Model of Radio Emission from Spherically Symmetric Pulsar Wind Nebulae
    S. J. Tanaka,
    Proceedings of IAU Symposium 291, Beijing, China, Aug. 2012

16. Model of Radio Emission from Spherically Symmetric Pulsar Wind Nebulae
    S. J. Tanaka,
    Proceedings of Electromagnetic Radiation from Pulsars and Magnetars, Zielona Góra, Poland, Apr. 2012

17. A Model of the Spectral Evolution of Pulsar Wind Nebulae
    S. J. Tanaka, & F. Takahara,
    Proceedings of the 2009 Fermi Symposium, Washington, D.C., Nov. 2009
International Conferences

□ 2020

1. **Induced Compton scattering in pulsar magnetospheres and up-to-date laser facilities (Invited Talk)**
   S. J. Tanaka
   Physics at the Cosmic Frontiers @ Toyama, Japan, 5, Mar. 2020 (conference canceled)

2. **Acceleration of Relativistic Jets with Tangled Magnetic Field (Oral)**
   S. J. Tanaka & K. Toma
   Active Galactic Nucleus Jets in the Event Horizon Telescope Era @ Sendai, Japan, 20, Jan. 2020

□ 2019

3. **Acceleration of Relativistic Outflows with Tangled Magnetic Field (Oral)**
   S. J. Tanaka & K. Toma
   Yamada Conference LXXI: Gamma-ray Bursts in the Gravitational Wave Era 2019 @ Yokohama, Japan, 30, Oct. 2019

4. **Induced Compton scattering in pulsar magnetospheres and up-to-date laser facilities (Invited Talk)**
   S. J. Tanaka
   9th East-Asia School and Workshop on Laboratory, Space, and Astrophysics @ Nagoya, Japan, 30, Jul. 2019

5. **Acceleration of Relativistic Outflows with Tangled Magnetic Field (Oral)**
   S. J. Tanaka & K. Toma
   HEPRO VII @ Barcelona, Spain, 9, Jul. 2019

6. **Dynamics of Pulsar Wind Nebula with Magnetic Dissipation and Turbulence (Poster)**
   S. J. Tanaka, K. Toma & N. Tominaga
   Supernova Remnants II: An Odyssey in Space After Steller Death @ Crete, Greece, 3–8, Jun. 2019

7. **Induced Compton scattering in pulsar magnetospheres and up-to-date laser facilities (Invited Talk)**
   S. J. Tanaka
   Matter in extreme conditions: from material science to planetary physics @ Montgenèvre, France, 19, Mar. 2019

8. **Sigma- and kappa- problems of the Crab Nebula (Invited Talk)**
   S. J. Tanaka
   Shock meeting @ Fukuoka, Japan, 4, Mar. 2019

□ 2018

9. **The Crab Nebula with tangled magnetic field: its radio emission and confinement by its supernova remnant (Invited Talk)**
   S. J. Tanaka
   8th East-Asia School and Workshop on Laboratory, Space, and Astrophysics @ Daejeon, Korea, 2, Aug. 2018

10. **Toward Experimental Observations of Induced Compton Scattering (Poster)**
    S. J. Tanaka, R. Yamazaki, Y. Kuramitsu, & Y. Sakawa
    12th International Conference on High Energy Density Laboratory Astrophysics @ Okayama, Japan, 28, May – 1, Jun. 2018

11. **Properties of Relativistic Outflows with Turbulent Magnetic Field and Its Dissipation (Oral)**
    S. J. Tanaka, K. Toma & N. Tominaga
Dawn of a new era for black hole jets in active galaxies @ Sendai, Japan, 26, Jan. 2018

2017

12. On the Radio-emitting Particles of the Crab Nebula: Stochastic Acceleration Model (Oral)
   S. J. Tanaka & K. Asano
   Pulsar Astrophysics: The Next Fifty Years (IAU Symposium 337) @ Jodrell Bank Observatory, United Kingdom, 7, Sep. 2017

13. Confinement of Pulsar Wind Nebulae by Their Supernova Remnants and Magnetic Dissipation (Oral)
   S. J. Tanaka, K. Toma & N. Tominaga
   Physics of Neutron Stars 2017 @ Saint-Petersburg, Russia, 13, Jul. 2017

14. Blocking metal accretion onto population III stars by stellar wind (Oral)
   S. J. Tanaka, G. Chiaki, N. Tominaga & H. Susa
   International Symposium on Origin of Matter and Evolution of Galaxies (OMEG 2017) @ Daejeon, Korea, 27, Jun. 2017

15. Induced Compton Scattering off Anisotropic Radiation (Poster)
   S. J. Tanaka
   Sixth International Conference on High Energy Density Physics (ICHED 2017) @ Wakayama, Japan, 5–9, Jun. 2017

2016

16. A Stochastic Acceleration Model of Pulsar Wind Nebulae (Oral)
   S. J. Tanaka & K. Asano
   The extreme Universe viewed in very-high energy gamma rays 2016 @ Kashiwa, Japan, 16, Dec. 2016

17. Induced Compton Scattering off Anisotropic Radiation (Oral)
   S. J. Tanaka
   East-Asia School & Workshop on Laboratory, Space and Astrophysical Plasmas @ Tsukuba, Japan, 15, Jul. 2016

18. A Stochastic Acceleration Model of Radio Emission from Pulsar Wind Nebulae (Poster)
   S. J. Tanaka & K. Asano
   East-Asia School & Workshop on Laboratory, Space and Astrophysical Plasmas @ Tsukuba, Japan, 11–16, Jul. 2016

19. A Stochastic Acceleration Model of Radio Emission from Pulsar Wind Nebulae (Poster)
   S. J. Tanaka & K. Asano
   Supernova Remnants: An Odyssey in Space After Steller Death @ Crete, Greece, 6–11, Jun. 2016

2015

20. Broadband Emission of Magnetar Wind Nebulae (Oral)
   S. J. Tanaka
   SNSNR 2015 @ ISAS/JAXA, Japan, 10, Nov. 2015

21. Broadband Emission of Magnetar Wind Nebulae (Oral)
   S. J. Tanaka
   TeVPA 2015 @ Kashiwa, Japan, 29, Oct. 2015

22. Constraint on Pulsar Wind Properties from Induced Compton Scattering: Applications (Oral)
   S. J. Tanaka
   HEAP 2015 @ KEK, Japan, 8, Oct. 2015
23. **Spectral Deformation by Induced Compton Scattering** (Oral)
   S. J. Tanaka
   The 1st Conference on Laser Energetics -Laser Astrophysics- @ Yokohama, Japan, 23, Apr. 2015

2014

24. **Broadband Emission from Wind Nebulae Powered by Magnetars** (Poster)
   S. J. Tanaka
   Fifth International Fermi Symposium @ Nagoya, Japan, 20–24, Oct. 2014

25. **Spectral Model of Wind Nebulae Powered by Magnetar** (Poster)
   S. J. Tanaka
   40th COSPAR Scientific Assembly 2014 @ Moscow, Russia, 2–10, Aug. 2014

26. **Constraint on Pulsar Wind Properties from Induced Compton Scattering off Radio Pulses** (Poster)
   S. J. Tanaka & F. Takahara
   Physics of Neutron Stars 2014 @ Saint-Petersburg, Russia, 28, Jul.–1, Aug. 2014

27. **Constraint on Pulsar Wind Properties from Induced Compton Scattering off Radio Pulses** (Oral)
   S. J. Tanaka & F. Takahara
   The Structure and Signals of Neutron Stars, from Birth to Death @ Florence, Italy, 28, Mar. 2014

28. **High Energy Emission from Spherical Pulsar Wind Nebulae** (Poster)
   S. J. Tanaka
   Suzaku-Maxi 2014 Expanding the Frontiers of the X-ray Universe @ Ehime University, Japan, 19–22, Feb. 2014

2013

29. **Broadband Emission Model of Spherical Pulsar Wind Nebulae** (Oral)
   S. J. Tanaka
   X-raying the Gamma-ray Universe –CTA-X-ray rink meeting– @ Hakone, Kanagawa, Japan, 5, Nov. 2013

30. **Broadband Emission Structure of Pulsar Wind Nebulae** (Poster)
    S. J. Tanaka
    ICRC2013 @ Rio de Janeiro, Brazil, 2–9, Jul. 2013

31. **Spectral and Spatial Study of Pulsar Wind Nebulae** (Invited Talk)
    S. J. Tanaka
    International Winter School on the Interstellar Medium and High Energy Phenomena 2013 @ Ise-Shima, Mie, Japan, 6, Mar. 2013

32. **Constraint on Pulsar Wind Properties Using Induced Compton Scattering by Relativistically Moving Cold Plasma** (Poster)
    S. J. Tanaka & F. Takahara
    International Winter School on the Interstellar Medium and High Energy Phenomena 2013 @ Ise-Shima, Mie, Japan, 3–8, Mar. 2013

2012

33. **Model of Radio Emission from Spherically Symmetric Pulsar Wind Nebulae** (Poster)
    S. J. Tanaka
    Neutron Stars and Pulsars: Challenges and Opportunities after 80 years IAU Symposium 291 (IAU General Assembly XXVIII) @ Beijing, China, 20–25, Aug. 2012
34. *Model of Radio Emission from Spherically Symmetric Pulsar Wind Nebulae* (Oral)
  S. J. Tanaka
  39th COSPAR Scientific Assembly @ Mysore, India, 16, Jul. 2012

35. *Model of Radio Emission from Spherically Symmetric Pulsar Wind Nebulae* (Oral)
  S. J. Tanaka
  Electromagnetic Radiation from Pulsars and Magnetars @ Zielona Góra, Poland, 26, Apr. 2012

  □ 2011

36. *Gamma-ray Emission from Young Pulsar Wind Nebulae* (Oral)
  S. J. Tanaka & F. Takahara
  High Energy Astroparticle Physics 2011 @ Tsukuba, Japan, 14, Nov. 2011

37. *Study of Young Pulsar Wind Nebulae and Their Pulsars with a Spectral Evolution Model* (Oral)
  S. J. Tanaka & F. Takahara
  Physics of Neutron Stars 2011 @ Saint-Petersburg, Russia, 11, Jul. 2011

  □ 2010

38. *Study of Young TeV Pulsar Wind Nebulae with a Spectral Evolution Model* (Oral)
  S. J. Tanaka & F. Takahara
  38th COSPAR Scientific Assembly 2010 @ Bremen, Germany, 23, Jul. 2010

39. *Study of Young TeV Pulsar Wind Nebulae with a Spectral Evolution Model* (Poster)
  S. J. Tanaka & F. Takahara
  International Winter School on the Interstellar Medium 2010 @ Ise-Shima, Mie, Japan, 22–26, Feb. 2010

40. *A Spectral Evolution of Young TeV Pulsar Wind Nebulae* (Poster)
  S. J. Tanaka & F. Takahara
  Exploring Supernova Remnants and Pulsar Wind Nebulae in X-rays: before and after ASTRO-H @ ISAS/JAXA, Japan, 18–19, Feb. 2010

  □ 2009

41. *A Model of the Spectral Evolution of Pulsar Wind Nebulae* (Poster)
  S. J. Tanaka & F. Takahara
  International School Particle Acceleration in the Universe @ Nagoya Japan, 12–14, Nov. 2009

42. *A Model of the Spectral Evolution of Pulsar Wind Nebulae* (Poster)
  S. J. Tanaka & F. Takahara
  2009 Fermi Symposium @ Washington D.C. USA, 2–3, Nov. 2009