

齋藤 理一郎

* 原著論文リスト

- Charge transport in carbon nanotubes: quantum effects of electron-phonon coupling,
S. Roche, J. Jiang, L. E. F. Foa Torres and R. Saito,
Journal of Physics:Condensed Matter **19**, 183203-1-21 (2007). 人数 : 0 人
- Electron-phonon coupling mechanism in two-dimensional graphite and single-wall carbon nanotubes,
Ge. G. Samsonidze, E. B. Barros, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus,
Phys. Rev. B **75**, 155420-1-8 (2007). 人数 : 0 人
- Chirality dependence of many body effects of single wall carbon nanotubes,
K. Sato, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus,
Vibrational Spectroscopy **45**, 89-94 (2007). 人数 : 0 人
- Local density of states at zigzag edges of carbon nanotubes and graphene,
K. Sasaki, K. Sato, R. Saito, J. Jiang, S. Onari, Y. Tanaka ,
Phys. Rev. B **75**, 235430-1-7 (2007). 人数 : 0 人
- Dependence of exciton transition energy of single-walled carbon nanotubes on surrounding dielectric materials,
Y. Miyauchi, R. Saito, K. Sato, Y. Ohno, S. Iwasaki, T. Mizutani, J. Jiang, S. Maruyama,
Chem. Phys. Lett. **442**, 394-399 (2007). 人数 : 0 人
- Raman spectroscopy on double-wall carbon nanotubes treated with H₂SO₄,
E. B. Barros, H. Son, Ge. G. Samsonidze, A. G. Souza Filho, R. Saito, Y. A. Kim, H. Muramatsu, T. Hayashi, M. Endo, J. Kong, M. S. Dresselhaus,
Phys. Rev. B **76**, 045425-1-11 (2007). 人数 : 0 人
- Finite length effects in DNA-wrapped carbon nanotubes,
S. G. Chou, H. Son, M. Zheng, R. Saito, A. Jorio, G. Dresselhaus, M. S. Dresselhaus,
Chem. Phys. Lett. **443**, 328-332 (2007). 人数 : 0 人
- Raman probe for selective-wrapping of single-walled carbon nanotubes by DNA,
Q. H. Yang, N. Gale, C. J. Oton, F. Li, A. Vaughan, R. Saito, I. S. Nandhakumar, H. M. Cheng, T. Brown, W. H. Loh,
Nanotechnology **18**, 405706-1-5 (2007). 人数 : 0 人
- Dependence of the G'-band intensity in Raman spectra on the metallicity of single wall carbon nanotubes,
K.K. Kim, J. S. Park, S. J. Kim, H. Z. Geng, K. H. An, C. M. Yang, K. Sato,

- R. Saito, Y. H. Lee,
Phys. Rev. B **76**, 205426-1-8 (2007). 人数：0人
- Discontinuity in the family pattern of single wall carbon nanotubes,
K. Sato, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus,
Phys. Rev. B **76**, 195446-1-7 (2007). 人数：0人
 - Resonance Raman study of polyynes encapsulated in single-wall carbon nanotubes,
L. M. Malard, D. Nishide, L. G. Dias, R. B. Capaz, A. P. Gomes, A. Jorio, C. A. Achete, R. Saito, Y. Achiba, H. Shinohara, M. A. Pimenta,
Phys. Rev. B **76**, 233412-1-4 (2007). 人数：0人
 - Aharonov-Bohm effect for the edge states of zigzag carbon nanotubes,
K. Sasaki, M. Suzuki, R. Saito,
Phys. Rev. B **77**, 045138-1-6 (2008). 人数：0人

* 総説類リスト

- 齋藤 理一郎: 「CNT(カーボンナノチューブ)のラマン分光」, 先端的概観検査技術に関する調査研究会報告書、(社)日本オプトメカニカトロンクス協会, 83-89, (2007).
- 齋藤 理一郎: 「ナノカーボン材料」, 電気学会誌 Vol. 127 No. 6, 340-343, (2007).
- 齋藤 理一郎: 「書評:基礎の固体物理学」, 物理学会誌 Vol. 62 No. 10, 799-799, (2007).

* 著書リスト

- ナノカーボンハンドブック,
齋藤 理一郎,
(株)エヌ・ティ・ーエス 2007
- Carbon Nanotubes,
R. Saito, C. Fantini, J. Jiang,
Springer Verlag 2008

* 国際研究集会への出席状況

- R. Saito, J. Jiang, K. Sato, J. S. Park, G. Dresselhaus, M. S. Dresselhaus: 「Exciton-phonon interaction and Raman intensity of carbon nanotubes (invited)」, 2nd Workshop on Nanotube Optics and Nanospectroscopy, Wonton 2007, Lord Elgin Hotel, Ottawa, Canada, (2007.6.4-7).
- A. Jorio, P. T. Araujo, I. O. Maciel, P. B. C. Pesce, L. M. Moreira, M. A. Pimenta, M. S. Dresselhaus, J. Jiang, R. Saito, S. Tretiak, S. Doorn: 「The optical transitions for single wall carbon nanotubes up to 4nm diameter (invited)」, 2nd Workshop on Nanotube Optics and Nanospectroscopy, Wonton 2007, Lord Elgin Hotel, Ottawa, Canada, (2007.6.4-7).

- J. Jiang, R. Saito, K. Sato, J. S. Park, Ge. G. Samsonidze, A. Jorio, G. Dresselhaus, M. S. Dresselhaus: 「Exciton-photon, exciton-phonon matrix elements and resonance Raman intensity of single-wall carbon nanotubes」, 19th Annual Workshop on Recent Developments in Electroni, North Carolina State University, (2007.6.13-15) .
- Y. Miyauchi, R. Saito, K. Sato, Y. Ohno, S. Iwasaki, T. Mizutani, J. Jiang, S. Maruyama: 「Dependence of exciton transition energy of single-walled carbon nanotubes on surrounding dielectric materials」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- K. Sato, R. Saito, J. Jiang, J. S. Park, G. Dresselhaus, M. S. Dresselhaus: 「Many body effects for E_{33} and E_{44} optical transition of single wall carbon nanotubes」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- J. S. Park, R. Saito, K. Sato, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Raman Effect by Length Control of the Single Wall Carbon Nanotube」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- R. Saito, K. Sato, J. S. Park, Y. Miyauchi, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Exciton properties for Raman spectra of single wall carbon nanotubes」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- E. B. Barros. Ge. G. Samsonidze, K. Sato, R. Saito: 「D Band Intensity Calculation for Graphene and SWNTs」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- Ki Kang Kim, Jin Sung Park, Sung Jin Kim, Hong Zhang Geng, Kay hyeok An, Cheol-Min Yang, Kentaro Sato, R. Saito, Young Hee Lee: 「Dependence of the G'-band intensity in Raman spectra on the metallicity of single wall carbon nanotubes」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- Leandro M Malard, D. Nishide, A. P. Gomes, L. G. Dias, R. B. Capaz, A. Jorio, C. A. Achete, R. Saito, Y. Achiba, H. Shinohara, M. A. Pimenta: 「Resonance Raman study of polyynes encapsulated in single wall carbon nan-

- otubes」, Eighth International Conference on the Science and Application of Nanotubes, NT07, Parque Metalurgico - Centro De Arles e Convencoes, Ouro Preto, Minas Gerais, Brazil, (2007.6.24-29) .
- 斎藤 理一郎: 「Exciton in single wall carbon nanotubes (invited)」, Semiconductor science and technology forum, 中国科学院半导体研究所, (2007.7.26) .
 - R. Saito, K. Sato, J. Jiang, J. S. Park, W. Izumida, Y. Miyauchi, G. Dresselhaus, M. S. Dresselhaus: 「Excitonic properties of single wall carbon nanotubes (invited)」, A3 Foresight Program (Meeting and Summer School) in Beijing, Tsinghua University, Beijing, China, (2007.7.25-29) .
 - W. Izumida, K. Sato, J. S. Park, R. Saito: 「Low Temperature Electron Transport through Interacting Single Wall Carbon nanotubes」, A3 Foresight Program (Meeting and Summer School) in Beijing, Tsinghua University, Beijing, China, (2007.7.25-29) .
 - Jin Sung Park, R. Saito, Kentaro Sato, Jie Jiang, Gene Dresselhaus, Mildred S. Dresselhaus: 「Excitonic Effect in Short Tube Length of the Single Wall Carbon Nanotube」, A3 Foresight Program (Meeting and Summer School) in Beijing, Tsinghua University, Beijing, China, (2007.7.25-29) .
 - K. Sato, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Chirality and diameter dependence of exciton energy of single wall carbon nanotubes」, A3 Foresight Program (Meeting and Summer School) in Beijing, Tsinghua University, Beijing, China, (2007.7.25-29) .
 - R. Saito: 「Collaboration network of nanotube science in Asia」, Asia Science Forum, Sendai International Center, Sendai, (2007.9.10-11) .
 - K. Sato, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Chirality and diameter dependence of exciton energy of single wall carbon nanotubes」, Asia Science Forum, Sendai International Center, Sendai, (2007.9.10-11) .
 - J. S. Park, R. Saito, K. Sato, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Raman Effect by Length Control of the Single Wall Carbon Nanotube」, Asia Science Forum, Sendai International Center, Sendai, (2007.9.10-11) .
 - R. Saito: 「Exciton Kataura plot and resonance Raman spectroscopy of single wall carbon nanotubes」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .
 - K. Sasaki, M. Suzuki, R. Saito, S. Onari, Y. Tanaka: 「Theory of superconductivity of carbon nanotubes and graphene」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .
 - Eduardo B. Barros, Kentaro Sato, R. Saito: 「Calculation of the D Band Raman Peak Intensity for Defective Graphene」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .

- Jin Sung Park, Eduardo B. Barros, R. Saito, Gene Dresselhaus, Mildred S. Dresselhaus: 「G' band Raman Spectrum of Double Layer Graphene」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .
- K. Sato, R. Saito, J. Jiang, G. Dresselhaus, M. S. Dresselhaus: 「Chirality and Diameter Dependence of Bright and Dark Exciton Energy of Single Wall Carbon Nanotubes」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .
- Y. Miyauchi, R. Saito, K. Sato, J. Jiang, S. Maruyama: 「Environmental Effect on Optical Transitions of SWNTs」, The 4th Korea-Japan Symposium on Carbon Nanotube, Kansai Seminar House, Kyoto, Japan, (2007.10.28-31) .
- R. Saito: 「Excitonic properties of single wall carbon nanotubes (invited)」, YKIS 2007 “Interaction and Nanostructural Effects in Low-Dimensional Systems”, Shiran Kaikan, Kyoto University, (2007.11.16) .
- R. Saito: 「Exciton and resonance Raman spectroscopy of single wall carbon nanotubes」, India-Japan Cooperative Science Programme: Recent Trends in Molecular Materials Research (invited), Hotel Samudra, Kovalam, Kerala, India, (2008.1.20-22) .
- R. Saito, K. Sato, P. Jing Sung, Y. Miyauchi, S. Maruyama, M. Dresselhaus, G. Dresselhaus: 「Environmental effect for exciton transition energy of single carbon nanotubes」, APS March Meeting 2008, New Orleans, Louisiana, USA, (2008.3.10-14) .
- K. Sasaki, M. Suzuki, R. Saito: 「Theory of superconductivity by the edge states in graphene」, APS March Meeting 2008, New Orleans, Louisiana, USA, (2008.3.10-14) .
- K. K. Kim, J. S. Park, S. J. Kim, H. Z. Geng, K. H. An, C. M. Yang, K. Sato, R. Saito, Y. H. Lee: 「Dependence of the Raman G' band intensity on metallicity of single-wall carbon nanotubes」, APS March Meeting 2008, New Orleans, Louisiana, USA, (2008.3.10-14) .
- 斎藤 理一郎, K. Sato, J.S. Park, K. Sasaki, G. Dresselhaus, M. S. Dresselhaus: 「Excitonic properties and Raman spectroscopy of single wall carbon nanotubes (invited)」, International Carbon Nanotube Conference in NU, Nagoya University, Nagoya, (2008.2.14-15) .

* 国際研究集会の組織

- 集会名: the 4th Korea-Japan symposium on Carbon Nanotubes
開催期日, 場所: Oct. 28-31, 2007, Kansai Seminar House, Kyoto, Japan
主催団体 講演団体: フラーレンナノチューブ学会、出席者: 100名
組織上の役割: 組織委員

* 外国からの研究者招致状況

- 受入 Gleb Zhelezov, アメリカ合衆国
2007.6.3-8.3.
Nano Japan Project による、米国 NSF による日本への学生派遣カーボンナノチューブに関する共同研究
- 受入 Z.K. Tang, 中国
2007.9.9-9.9.
アジアサイエンスフォーラムに出席、および共同研究
- 受入 M.S.Dresselhaus, アメリカ合衆国
2007.12.12-12.12.
COE シンポジウムで発表、及び共同研究の推進
- 受入 S. Roche, フランス
2008.1.27-2.2
ナノチューブの輸送に関する共同研究の推進
- 受入 M. A. Pimenta, ブラジル
2008. 2.16-20
ナノチューブのラマン分光に関する共同研究の推進

* 非常勤講師等 (国内外)

- JSPS A3 Summer School, 2007 年 7 月 26 - 28 日 TsingHua University, Electronic properties of single wall carbon nanotubes, サマースクール講師

* 科研費関係

- 特定領域研究, 2004.10-
カーボンおよび多軌道系の超伝導, 代表者
11400000 円

* その他の研究資金

- 独立行政法人科学技術振興機構 戦略的創造事業部 『ナノ構造体材料』(2003.10-2008.3) 「情報処理・通信における集積・機能限界の克服実現のためのナノデバイス・材料・システムの創製」, 研究領域名 高度情報処理・通信の実現に向けたナノ構造体材料の制御と利用, 研究総括: 福山 秀敏 (東北大学金属材料研究所、教授), 研究課題名 新世代カーボンナノチューブの創製、評価と応用, 代表者名 篠原 久典 名古屋大学 理学研究科教授, 分担者 1,514 万円 (2007 年度)

* 学内委員

- 理学部教育制度委員会 (部局内委員会)

- オープンキャンパス実行委員会

- 物理学の最前線実行委員

* 政府省庁審議員等

- 文部科学省科学技術・学術審議官専門委員 (2004.4-)
- 文部科学省科学技術政策研究所科学技術専門家ネットワーク専門調査員 (2004.4-)
- NEDO 産業技術研究助成事業のピアレビュー (事前評価者) (2004.4-)

* 民間団体委員等

- 新世代研究所、ATI 研究助成選考委員 (2007-)
-