


平成 30 年度研究成果一覧


List of Research Achievements in 2018 Fiscal Year

(1) 学会誌 (査読あり) / Peer-Reviewed Journals  : Papers included in this volume


**Geophysical Research Letters** (Impact Factor=4.339)

-  Nishiwaki, T., Lin, A. and Lin, W. (2018), Recovery of stress during the interseismic period around the seismogenic fault of the 1995 Mw 6.9 Kobe earthquake, Japan. *Geophysical Research Letters*. **45**, 12,814-12,820, DOI: 10.1029/2018GL079317


**Geochemistry, Geophysics, Geosystems** (Impact Factor=2.981)

-  Ota, Y., Kawahata, H., Kuroda, J., Yamaguchi, A., Suzuki, A., Araoka, D., Abe-Ouchi, A., Yamada, Y., Ijiri, A., Kanamatsu, T., Kinoshita, M., Moe, K. T., Lin, W., Saito, S., Sanada, Y., Hamada, Y., Nakamura, Y., Shinmoto, Y., Wu, H. Y., Ahagon, N., Aoike, K., Iijima, K., Machiyama, H., Tejada, M. L., Umetsu, K., Usui, Y., Yamamoto, Y., Yoshikawa, S., Jimenez-Espejo, F., Haraguchi, S., Komai, N., Suga, H., Abe, N., Gupta, L., Hirose, T., Masaki, Y., Nomura, S., Sugihara, T., Tanikawa, W., Kubo, Y., Maeda, L. and Toczko, S. (2019), Indian Monsoonal Variations During the Past 80 Kyr Recorded in NGHP-02 Hole 19B, Western Bay of Bengal: Implications from Chemical and Mineral Properties. *Geochemistry, Geophysics, Geosystems*. **20(1)**, 148–165. DOI: 10.1029/2018GC007772

**Progress in Earth and Planetary Science** (Impact Factor=2.481)

-  Hamada, Y., Hirose, H., Ijiri, A., Yamada, Y., Sanada, Y., Saito, S., Sakurai, N., Sugihara, T., Yokoyama, T., Saruhashi, T., Hoshino, T., Kamiya, N., Bowden, S., Cramm, M., Henkel, S., Homola, K., Imachi, H., Kaneko, M., Lagostina, L., Manners, H., McClelland, H., Metcalfe, K., Okutsu, N., Pan, D., Raudsepp, M. J., Sauvage, J., Schubotz, F., Spivack, A., Tonai, S., Treude, T., Tsang, M., Viehweger, B., Wang, D. T., Whitaker, E., Yamamoto, Y., Yang, K., Kinoshita, M., Maeda, L., Kubo, Y., Morono, Y., Inagaki, F. and Heuer, V. B. (2018), In-situ mechanical weakness of subductingsediments beneath a plate boundary décollement in the Nankai Trough. *Progress in Earth and Planetary Science*. **5**, DOI: 10.1186/s40645-018-0228-z

**Geological Society of America Special Paper**

-  Lin, W., Tadaï, O., Kinoshita, M., Kameda, J., Tanikawa, W., Hirose, T., Hamada, Y. and Matsubayashi, O. (2018), Thermal conductivity changes in subducting basalt, Nankai subduction zone, SW Japan: An estimation from laboratory measurements under separate high-pressure and high-temperature conditions, in Byrne, T. et al., eds., *Geology and Tectonics of Subduction Zones: A Tribute to Gaku Kimura:*

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*Geological Society of America Special Paper*. **534**, 35-50, DOI: 10.1130/2018.2534(02).

#### 物理探査

大田優介, 後藤忠徳, 小池克明, 柏谷公希, 林 為人, 多田井修, 笠谷貴史, 金松敏也, 町山栄章 (2018), 海底熱水活動域で得られた岩石試料の電気伝導度特性に基づく岩石物理モデルの構築, *物理探査*, **71**, 43-55, DOI: 10.3124/segj.71.43

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### (2) 総説・解説 / Review Articles

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#### 地質学雑誌

山田泰広, Jim Mori, 氏家恒太郎, 林 為人, 小平秀一 (2018), 東北地方太平洋沖地震後の緊急調査掘削 (IODP343 次航海: J-FAST) の成果, *地質学雑誌*, **124**, 67-76, DOI: 10.5575/geosoc.2017.0080

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### (3) 講演会論文集&要旨集 (国際学会) / Proceedings (International Conferences)

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#### **8th International Symposium on Submarine Mass Movements and Their Consequences, May 7–9, 2018, Victoria, Canada**

Kamiya, N., Utsunomiya, M., Yamamoto, Y., Fukuoka, J., Zhang, F. and Lin, W. (2018), Formation of excess fluid pressure, fluidization and MTDs in the Plio-Pleistocene Boso forearc basin, central Japan. *8th International Symposium on Submarine Mass Movements and Their Consequences*. Oral Presentation

#### **EUROCK 2018 - the ISRM European Rock Mechanics Symposium, May 22-26, 2018, Saint-Petersburg, Russia**

Lin, W., Tadai, O., Sugimoto, T., Hirose, T., Tanikawa, W. and Hamada, Y. (2018), Measurements of thermal properties of rock samples under high temperature conditions. *Geomechanics and Geodynamics of Rock Masses: Proceedings of the 2018 European Rock Mechanics Symposium*. **1**, 307-311. Oral presentation

Sugimoto, T., Yamamoto, Y., Lin, W., Yamamoto, Y., Hirose, T. and Kamiya, N. (2018), Recovery of in-situ orientation of drilled rock core samples for crustal stress measurements. *Geomechanics and Geodynamics of Rock Masses: Proceedings of the 2018 European Rock Mechanics Symposium*. **1**, 563-566. Oral presentation

#### **15th International Symposium on Mineral Exploration, November 26-27, 2018, Kyoto, Japan**

Ohta, Y., Goto, T., Koike, K., Kashiwaya, K., Lin, W., Tadai, O., Kasaya, T., Kanamatsu, T. and Machiyama, H. (2018), Study on physical properties and mineral compositions of

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rock samples obtained in the seafloor hydrothermal area. *15th International Symposium on Mineral Exploration*. S4-4. Oral presentation

Sugimoto, T., Lin, W. and Lin, A. (2018), In-situ stress measurements by two different core-based methods and their comparison. *15th International Symposium on Mineral Exploration*. S5-6. Oral presentation

**AGU Fall Meeting 2018, December 10-14, 2018, Washington, D. C., USA**

Lin, W., Sugimoto, T., Sado, K., Yang, X., Shibutani, S., Kamiya, N., Kayamoto, Y., Hidata, Y. and Lin, A. (2018), Recovery process of temperature profile in a scientific-drilling borehole from a disturbed state caused by drilling mud circulation. *AGU Fall Meeting 2018*. T23D-0400. Poster presentation

Tanikawa, W., Hirose, T., Hamada, Y., Gupta, L. P., Ahagon, N., Masaki, Y., Kinoshita, M., Yamamoto, Y., Abe, N., Wu, H. Y., Sugihara, T., Nomura, S., Lin, W. and Yamada, Y. (2018), Porosity, permeability, and grain size of sediment cores from gas hydrate-bearing sites and their implication for overpressure in shallow formations: Results from NGHP-02, Krishna-Godavari Basin, India. *AGU Fall Meeting 2018*. OS23D-1651.

Gupta, L. P., Tanikawa, W., Hamada, Y., Hirose, T., Ahagon, N., Sugihara, T., Kinoshita, M., Abe, N., Nomura, S., Masaki, Y., Wu, H. Y., Lin, W. and Yamada, Y. (2018), A New Procedure for Quick Estimation of Porosity and Density of Hydrate-bearing Sediments by Using Medical X-ray CT Scanner. *AGU Fall Meeting 2018*. OS51F-1313.

Wu, H. Y., Chan, C. H., Lin, W. and Sanada, Y. (2018), Stress magnitude and orientation modeling with logging data in a deep coal-bearing formation near offshore Shimokita peninsular, North-East Japan. *AGU Fall Meeting 2018*. T13G-0314.

Yokoyama, T., Lin, A., Lin, W., Danjo, T. and Ito, T. (2018), Crustal stress states around Nojima fault measured by using a new testing system for hydraulic fracturing. *AGU Fall Meeting 2018*. T23D-0393.

Nishiwaki, T., Lin, A. and Lin, W. (2018), Current stress orientation around the Nojima Fault that triggered the 1995 Mw 6.9 Kobe earthquake, Japan. *AGU Fall Meeting 2018*. T23D-0395.

Kamiya, N., Hirose, T., Yamamoto, Y., Hamada, Y., Bowden, S. A., Tsang, M., Yang, K., Tonai, S., Lin, W. and Expedition 370 Scientists (2018), Paleo-thermal anomaly along

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with the décollement off the Cape of Muroto, Japan: controlled by subduction. *AGU Fall Meeting 2018*. T41H-0400. Poster presentation

Nagata, S. and Lin, W. (2018), ASR compliance ratio measurement for determination of stress in mudstone. *AGU Fall Meeting 2018*. T23D-0404. Poster presentation

Miura, N., Lin, W., Tadai, O., Sugimoto, T., Yang, X., Hamada, Y. and Hirose, T. (2018), Development of Thermal Property Measurement Procedure of Cuttings by Theory of the Transient Plane Source. *AGU Fall Meeting 2018*. T23D-405. Poster presentation

#### **AOGS 2018, June 3-8, 2018, Honolulu, Hawaii**

Kinoshita, M., Shiraishi, K., Hashimoto, Y. and Lin, W. (2018), Geometrical Dependence of the Stress and Slip Tendency Acting on the Subduction Megathrust of Nankai Seismogenic Zone Off Kumano. *AOGS 2018*. SE11-A004.

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#### **(4) 講演会論文集&要旨集 (国内学会) / Proceedings (Domestic Conferences)**

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日本地球惑星科学連合 2018 大会, 2018 年 5 月 20 日~24 日, 千葉

志賀正茂, 梁 云峰, 村田澄彦, 林 為人 (2018), CO<sub>2</sub>/塩水/白雲母三相界面系における接触角の塩濃度依存性に関する分子動力的研究, *JpGU2018*, HSC05-09

Kinoshita, M., Shiraishi, K., Hashimoto, Y., Lin, W. (2018), Geometrical Dependence on the Stress and Slip Tendency Acting on the Subduction Megathrust of Nankai Seismogenic Zone Off Kumano. *JpGU2018*. SSS04-02.

大田優介, 後藤忠徳, 小池克明, 柏谷公希, 林 為人, 多田井修, 笠谷貴史, 金松敏也, 町山栄章 (2018), 海底熱水鉱床: 岩石サンプルの化学組成を組み込んだ電気伝導度モデルの構築, *JpGU2018*. SCG61-12.

西脇隆文, 林 愛明, 林 為人 (2018), 1995 年神戸地震後 20 年における野島断層周辺の応力配置の回復, *JpGU2018*. SIT26-P03.

小村健太郎, 林 為人, 伊藤高敏, 船戸明雄 (2018), 既存岩石コアへコア変形法を適用した原位置地殻応力測定, *JpGU2018*. SIT26-P04.

矢引優太郎, 金川久一, 杉本達洋, 林 為人 (2018), 日高変成岩類の比抵抗測定に基づく日高地殻の比抵抗構造, *JpGU2018*. SSS11-P01.

谷川 亘, 廣瀬丈洋, 濱田洋平, Gupta Lallan, 正木裕香, 林 為人, 阿波根直一, 阿部なつ江, 呉 泓昱, 杉原孝充, 野村 瞬, 木下正高, 山田泰広, NGHP Expedition 02 JAMSTEC

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Science Team (2018), インド沿岸域ガスハイドレート層の高間隙率が示唆する高間隙水圧の発達, *JpGU2018*. MIS17-P15.

濱田洋平, 廣瀬丈洋, 斎藤実篤, Moe Kyaw, 吳 泓昱, 谷川 亘, 真田佳典, 中村恭之, 眞本悠一, 杉原孝充, 林 為人, 阿部なつ江, Gupta Lallan, 木下正高, 正木裕香, 野村 瞬, 山田泰広, NGHP Expedition 02 JAMSTEC Science Team (2018), A new rotary-shear hydrothermal apparatus towards the reproduction of earthquake faulting beneath the internal ocean of Enceladus, *JpGU2018*. MIS17-P17.

廣瀬丈洋, 谷川 亘, 濱田洋平, 林 為人, 畠田健太郎, 多田井修, 吳泓昱, 野村 瞬, 阿部なつ江, Gupta Lallan, 杉原孝充, 正木裕香, 木下正高, 山田泰広, NGHP Expedition 02 JAMSTEC Science Team (2018), インド東沿岸域クリシュナ・ゴダバリ盆地における堆積層の強度特性, *JpGU2018*. MIS17-P16.

Yano, S., Lin, W., Sugimoto, T. and Lin, A. (2018), In-situ Stress measurements in the vicinity of the Nojima fault by core-based methods. *JpGU2018*. MIS08-P11. Poster presentation

Nagata, S. and Lin, W. (2018), Measurement of ASR compliance ratio of the core samples for determining stress state in drilling site C0019. *JpGU2018*. MIS08-P12. Poster presentation

Miura, N., Lin, W., Tadai, O., Sugimoto, T., Hamada, Y. and Hirose, T. (2018), Development of Thermal Property Measurement Procedure of Cuttings by Theory of the Transient Plane Source. *JpGU2018*. MIS08-P13. Poster presentation

石油技術協会春季講演会, 2018年6月13日~14日, 新潟

栢本悠大, 林 為人, 津坂仁和, 村 美樹, 古田康平, 長野優羽, 古賀大晃 (2018), 八橋油田北部地域における掘削コアを用いた地殻応力場推定, 平成30年度石油技術協会春季講演会要旨集. 口頭発表

西本尚矢, 久保田歩, 村田澄彦 (2018), ナノエマルジョンによるセルロースナノファイバーの圧入性改善, 平成30年度石油技術協会春季講演会要旨集. 口頭発表

日高悠貴, 村田澄彦, 梁 云峰, 高木元太 (2018), 分子動力学法を用いたアスファルテンと分散剤の相互作用スタディ, 平成30年度石油技術協会春季講演会要旨集. 口頭発表

井上陽太, 村松玲奈, 村田澄彦 (2018), 低塩分濃度水攻法における鉱物表面の濡れ性変化に及ぼすカチオンと塩濃度の効果, 平成30年度石油技術協会春季講演会要旨集. 口頭発表

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**日本地質学会第 125 年学術大会，2018 年 9 月 5 日～7 日，札幌**

山本由弦，山本裕二，神谷奈々，杉本達洋，廣瀬丈洋，奥津なつみ，山田泰広，林 為人，  
Expedition 370 (2018)，乗船研究者室戸沖南海沈み込み帯再訪：IODP Exp. 370 報告，  
日本地質学会第125年学術大会. R14-O-8. 口頭発表

神谷奈々，廣瀬丈洋，濱田洋平，山本由弦，林 為人，Expedition 370 乗船研究者 (2018)，  
室戸沖における南海トラフ沈み込み帯先端部の古地温異常，日本地質学会第125年学術  
大会. R14-O-10. 口頭発表

**平成 30 年度資源・素材関係学協会合同秋季大会，2018 年 9 月 10 日～12 日，福岡**

清水悠太郎，村田澄彦 (2018)，ジオメカニクスによる CCS の安全性評価：流体流動-力学連成  
解析の高精度化，平成 30 年度資源・素材関係学協会合同秋季大会. 口頭発表

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**(5) 招待講演 / Invited Lectures**

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**AOGS 2018, June 3-8, 2018, Honolulu, Hawaii**

Lin, W. and Sakaguchi, K. (2018), Stress measurements in seismogenic zone: dependence  
of stress change patterns accompanied with earthquakes on locations. *AOGS 2018*.  
SE11-A006

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**(6) 書籍 / Book**

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なし

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**(7) 表彰 / Award**

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なし

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**(8) シンポジウム開催 / Organizing Symposium**

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なし

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**(9) その他 / Else**

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**Unitet States Patent**

Inventors: Inventors: Yang, X., Lin, W., Zeng, X., Shi, X., Yu, C. and Xu, Z. (2019), Device  
for monitoring temperature response to stress change in strata, US Patent No. US  
10,114,147 B2, Date of Patent: Oct 30, 2018.

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**Encyclopedia**

Yang, X., and Lin, W. (2018), Thermistor, in Encyclopedia of Engineering Geology, edited by P. T. Bobrowsky and B. Marker, pp. 1-2, Springer International Publishing, Cham, DOI: 10.1007/978-3-319-12127-7\_282-1