

令和元年度発表論文一覧 | Publications of FY2019

Category : 1: peer reviewed, 2: non peer reviewed journals/books, 3: others

ID	Title タイトル	IERAuthor IER著者	Author 著者	Journal 雑誌名	Category	Month/Year 年月	DOI
					分類	年月	
IER-2019-058	Measurement of absorbed dose rate in air at the first deuterium plasma experiment in LHD	S. Hirao	Y. Shiroma, <u>S. Hirao</u> , N. Akata, M. Furukawa, H. Miyake, T. Saze, M.	Plasma and Fusion Research, 14, 1305130	1	July, 2019	
IER-2019-057	Development of field estimation technique and improvement of environmental tritium behavior model	S. Hirao	S. Yokoyama, T. Takahashi, M. Ota, H. Kakiuchi, S. Sugihara, <u>S. Hirao</u> , N. Momoshima, T. Tamari, N. Shima, M. Atarashi-Andoh, S. Fukutani, S. Nakasone, M. Furukawa, M. Tanaka, N. Akata	Plasma and Fusion Research, 14, 3405099	1	June, 2019	10.1585/pfr.14.3405099
IER-2019-056	Wind wave and lithodynamics conditions of the West Coast of Crimea. Part 2: Projections on the 21st century. (In Russian)	Zheleznyak M.I.	Polonsky A.B., <u>Zheleznyak M.I.</u>	Monitoring Systems of Environment, 4(38), pp 99-107	1	December, 2019	
IER-2019-055	Wind wave and lithodynamics conditions of the West Coast of Crimea. Part 1: Recent climate. (In Russian)	Zheleznyak M.I.	<u>Zheleznyak M.I.</u> , Polonsky A.B.	Monitoring Systems of Environment, 3(37) p 79-88	1	September, 2019	
IER-2019-054	Numerical modeling of nonlinear hydrodynamics of the coastal areas	Zheleznyak M.I.	Kantardgi, I.G., <u>Zheleznyak M.I.</u> and Anshakov, A.S.	Magazine of Civil Engineering, 87(3), p. 80-92	1	May, 2019	
IER-2019-053	A modeling approach to estimate the ¹³⁷Cs discharge in rivers from immediately after the Fukushima accident until 2017.	Kenji Nanba, Mark Zheleznyak.	Sakuma Kazuyuki, Takahiro Nakanishi, Kazuya Yoshimura, Hiroshi Kurikami, <u>Kenji Nanba, Mark Zheleznyak</u> .	Journal of Environmental Radioactivity, 208, p.106041	1	November, 2019	10.1016/j.jenvrad.2019.106041
IER-2019-052	Size-dependent changes in habitat use of Japanese eel <i>Anguilla japonica</i> during the river life stage.	T. Wada	M. Kume, Y. Terashima, F. Kawai, A. Kutzer, <u>T. Wada</u> , Y. Yamashita	Environmental Biology of Fishes, Volume 103. pages 269-281.	1	February, 2020	10.1007/s10641-020-00957-w
IER-2019-051	Overview of atmospheric dispersion of radionuclides after the accident At Fukushima Dai-ichi NPP from the past and current knowledge of modeling and monitoring data	Hirao S	<u>Hirao S</u>	Proceedings INUDECO-2019. Fourth International Conference on Nuclear Decommissioning and Environment Recovery, Slavutyich, Ukraine, 24-27 April 2019, Published by Chernihiv Technical University, ISBN 978-617-7571-39-0, p. 24-25	3	April, 2019	
IER-2019-050	Overview of initial phase of the project SATREPS: Strengthening of the environmental radiation control and legislative basis for the environmental remediation of radioactively contaminated sites	Nanba K., Zheleznyak M., Hirao S., Igarashi Y., Ishiniwa H., Konoplev A., Rahman I., Shibasaki N., Tsukada H., Yoschenko V., Wakiyama Y.	<u>Nanba K.</u> , Onda Y., Sakaguchi A., <u>Zheleznyak M.</u> , Hirao S., Igarashi Y., <u>Ishiniwa H.</u> , <u>Konoplev A.</u> , <u>Rahman I.</u> , <u>Shibasaki N.</u> , Takahashi J., <u>Tsukada H.</u> , Uematsu S., <u>Yoschenko V.</u> , <u>Wakiyama Y.</u> , Yamasaki S	Proceedings INUDECO-2019. Fourth International Conference on Nuclear Decommissioning and Environment Recovery, Slavutyich, Ukraine, 24-27 April 2019, Published by Chernihiv Technical University, ISBN 978-617-7571-39-0, p. 7-13	3	April, 2019	
IER-2019-049	Development of models and software systems for the removal of radionuclides from the Exclusion Zone in	Zheleznyak M., Konoplev	Pylypenko O., <u>Zheleznyak M.</u> , Kivva	Proceedings INUDECO-2019. Fourth International Conference on Nuclear Decommissioning and	3	April, 2019	
IER-2019-048	Development of models and software systems for atmospheric transfer of radionuclides from the Exclusion Zone in emergency situations (in Ukrainian)	Hirao S., Zheleznyak M	Talerko N., Kovalets I., Sinkevich R., <u>Hirao S.</u> , <u>Zheleznyak M</u>	Proceedings INUDECO-2019. Fourth International Conference on Nuclear Decommissioning and Environment Recovery, Slavutyich, Ukraine, 24-27 April 2019, Published by Chernihiv Technical University, ISBN 978-617-7571-39-0, p. 237-239	3	April, 2019	
IER-2019-047	Pollution source identification of Halda river water using field observation, laboratory analysis and GIS technique	I.M.M. Rahman	M.A. Karim, M.H. Uddin, S. Barua, B. Nath, A.I. Chowdhury, M.A. Hoque and <u>I.M.M. Rahman</u>	Oriental Journal of Chemistry, Vol. 35, No. 5, pp. 1480-1490, 2019	1	October, 2019	10.13005/ojc/350502
IER-2019-046	被災地の野生動物はいま (中) イノシシに蓄積する放射性Cs Wild animals in evacuation areas: Radiocaesium in wild boar	塚田祥文	齋藤梨絵, <u>塚田祥文</u>	Green Power 2019.12:10-11	3	December, 2019	
IER-2019-045	福島島の農業環境における放射性セシウムと作物摂取による内部被ばく線量 Radiocaesium in agricultural environment and internal radiation dose from foods in Fukushima	塚田祥文	<u>塚田祥文</u>	(学術の動向 24, 18-25.)	3	July, 2019	
IER-2019-044	Exchangeability of ¹³⁷Cs and K in agricultural soils after decontamination in the eastern coastal area of Fukushima	H. Tsukada	K. Kurokawa, A. Nakao, H. <u>Tsukada</u> , Y. Mampuku and J. Yanai	Soil Science and Plant Nutrition Volume 65, 2019 - Issue 4	1	2019	10.1080/00380768.2019.1622402
IER-2019-043	Quantifying spatial distribution of ¹³⁷Cs in reference site soil in Asia	H. Tsukada	K. Tagami, H. <u>Tsukada</u> and S. Uchida	Catena 180, 341-345	1	September, 2019	10.1016/j.catena.2019.05.009
IER-2019-042	Vertical distribution of I-129 in forest soil collected near the Fukushima Daiichi Nuclear Power Plant boundary	H. Tsukada	G. Yang, H. Tazoe, H. <u>Tsukada</u> , J. Hu, Y. Shao and M. Yamada	Environmental Pollution 250, 578-585	1	June, 2019	10.1016/j.envpol.2019.04.053
IER-2019-041	森に住むアカネズミと放射性物質 (The Japanese field mouse living in the forest and radioactive materials)	石庭寛子	<u>石庭寛子</u>	Green Power 2019.11:10-11	3	November, 2019	
IER-2019-040	Prediction of internal exposure by Cs-137 of ranbury collected in difficult-to-return area of Fukushima dai-ichi nuclear power plant 2 -EGS5 user code and internal exposure calculation from 2012 to 2016	Ishiniwa Hiroko	Endoh Daiji, Hirayama Hideo, <u>Ishiniwa Hiroko</u> , Onuma Manabu	KEK Proceedings. 2018-13:19-27	1	March, 2019	
IER-2019-039	The model of biogenic fluxes and depots of ⁹⁰Sr in contaminated pine stands	Yoschenko, V. I.	Holiaka, D. M., Levchuk, S. E., <u>Yoschenko V.I.</u> , Yoschenko, L. V., & Holiaka, M. A.	Scientific Bulletin of UNFU, 29(9), 81-86	1	December, 2019	10.36930/40290914

IER-2019-038	GPS-coupled contaminant monitors on free-ranging Chernobyl wolves challenge fundamental assumptions in exposure risk assessments	T. G. Hinton	T. G. Hinton , M. E. Byrne, S. C. Webster, C. N. Love, D. Broggio, F. Trompier, D. Shamovich, S. Horloogin, S. L. Lance, J. Brown, M. Dowdall, J. C. Beasley	Environment International, Volume 133, Part A	1	December, 2019	
IER-2019-037	Mating of escaped domestic pigs with wild boar and possibility of their offspring migration after the Fukushima Daiichi Nuclear Power Plant accident	H. Ishinawa, T. G. Hinton, S. Kaneko	D. Anderson, R. Toma, Y. Negishi, K. Okuda, H. Ishinawa , T. G. Hinton , K. Nanba, H. B. Tamate, S. Kaneko	2019. Nature- Scientific Reports	1	August, 2019	
IER-2019-036	SPECIATION OF IODINE IN SOIL SOLUTION IN FOREST AND GRASSLAND SOILS IN ROKKASHO, JAPAN	H. Tsukada	A. Takeda, Y. Unno, H. Tsukada , Y. Takaku, S. Hisamatsu	Radiation Protection Dosimetry, Volume 184, Issue 3-4, October 2019, Pages 368-371	1	April, 2019	10.1093/rpd/ncz103
IER-2019-035	Repeatability and reproducibility of measurements of low dissolved radiocesium concentrations in freshwater using different pre-concentration methods	H. Tsukada	M. Kurihara, T. Yasutaka, T. Aono, N. Ashikawa, H. Ebina, T. Iijima, K. Ishimaru, R. Kanai, Z. Karube, Y. Konnai, T. Kubota, Y. Maehara, T. Maeyama, Y. Okizawa, H. Ota, S. Otosaka, A. Sakaguchi, H. Tagomori, K. Taniguchi, M. Tomita, H. Tsukada , S. Hayashi, S. Lee, S. Miyazu, M. Shin, T. Nakanishi, T. Nishikiori, Y. Onda, T. Shinano, H. Tsuji	Journal of Radioanalytical and Nuclear Chemistry 322, 477-485	1	November, 2019	10.1007/s10967-019-06696-2
IER-2019-034	Estimation of Dose Rate for the Large Japanese Field Mouse (Apodemus speciosus) Distributed in the "Difficult-to-Return Zone" in Fukushima Prefecture	Hiroko Ishinawa	Manabu Onuma, Daiji Endoh, Hiroko Ishinawa, Masanori Tamaoki	Low-Dose Radiation Effects on Animals and Ecosystems, pp 17-30	1	November, 2019	10.1007/978-981-13-8218-5_2
IER-2019-033	Chelator-assisted washing for the extraction of lead, copper, and zinc from contaminated soils: A remediation approach	I.M.M. Rahman	H. Hasegawa, M.A.A. Mamun, Y. Tsukagoshi, K. Ishii, H. Sawai, Z.A. Begum, A.S. Mashio, T. Maki, I.M.M. Rahman	Applied Geochemistry, Volume 109, Pages 104397	1	October, 2019	10.1016/j.apgeochem.2019.104397
IER-2019-032	Evaluation of recession process of marine biota in Japan after the 11 March 2011 accident by biota-seawater concentration ratio of global fallout- ¹³⁷ Cs	Hyoë Takata	Hyoë Takata , Masahi Kusakabe, Mizuro Yokota, Hiroshi Takaku,	Aquabiology, Volume 41(4), Pages 377-384	2	2019	
IER-2019-031	Radioactive Contamination in Forest by the Accident of Fukushima Daiichi Nuclear Power Plant: Comparison with Chernobyl	Vasyl Yoschenko	Vasyl Yoschenko , Valery Kashparov, Tatsuhiko Ohkubo	Radiocesium Dynamics in a Japanese Forest Ecosystem. Springer, Singapore, Pages 3-22	1	2019	
IER-2019-030	Post-release behaviors and movements of cultured and wild Japanese eels (Anguilla japonica) in a shallow brackish water lagoon in northeastern Japan	Wada, T.	Noda, T., Wada, T. , Iwasaki, T., Sato, T., Narita, K., Matsumoto, I., Hori, T., Mitamura, H., Arai, N.	Environmental Biology of Fishes (in press)	1	2019	
IER-2019-029	Long-term environmental dynamics of radiocesium and future prediction in agriculture and fisheries - from the viewpoint of agriculture and fisheries	Toshihiro Wada	Takuro Shinano, Toshihiro Wada	Radioisotopes (in press)	1	2019	
IER-2019-028	Longitudinal distribution and microhabitat use of young Japanese eel Anguilla japonica in a small river flowing through paddy areas	Wada, T.	Kume, M., Terashima, Y., Wada, T. , Yamashita, Y.	Journal of Applied Ichthyology, Vol.35, pp.876-883	1	August, 2019	10.1111/jai.13911
IER-2019-027	Land use types control solid wash-off rate and entrainment coefficient of Fukushima-derived ¹³⁷Cs, and their time dependence	Yoshifumi Wakiyama, Yasunori Igarashi	Yoshifumi Wakiyama , Yuichi Onda, Kazuya Yoshimura, Yasunori Igarashi , Hiroaki Kato	Journal of Environmental Radioactivity, in press	1	2019	10.1016/j.jenvrad.2019.105990
IER-2019-026	Metals in Soil-Contamination and Remediation	I.M.M. Rahman	Z.A. Begum, I.M.M. Rahman , H. Hasegawa	IntechOpen Limited, Open access peer-reviewed Edited Volume, London	1	March, 2019	
IER-2019-025	Assessment of health risks associated with potentially toxic element contamination of soil by end-of-life ship dismantling in Bangladesh	I.M.M. Rahman	I. Alam, S. Barua, K. Ishii, S. Mizutani, M.M. Hossain, I.M.M. Rahman , H. Hasegawa	Environmental Science and Pollution Research, Volume 26, No. 23, Pages. 24162-24175	1	August, 2019	
IER-2019-024	Formation and stability of the mixed-chelator complexes of Sr²⁺, Mg²⁺, Ca²⁺, Ba²⁺, and Y³⁺ in solution with bio-relevant chelators	I.M.M. Rahman, T. Takase	Z.A. Begum, I.M.M. Rahman , T. Takase , H. Hasegawa	Journal of Inorganic Biochemistry, Volume 195, Pages 141-148	1	June, 2019	
IER-2019-023	Comparative biotransformation and detoxification potential of arsenic by three macroalgae species in seawater: Evidence from laboratory culture studies	I.M.M. Rahman	M.A.A. Mamun, Y. Omori, O. Miki, I.M.M. Rahman , A.S. Mashio, T. Maki, H. Hasegawa	Chemosphere, Volume 228, Pages 117-127	1	August, 2019	
IER-2019-022	Bioaccumulation and biotransformation of arsenic by the brown macroalgae Sargassum patens C. Agardh in seawater: Effects of phosphate and iron ions	I.M.M. Rahman	M.A.A. Mamun, Y. Omori, R.I. Papry, C. Kosugi, O. Miki, I.M.M. Rahman , A.S. Mashio, T. Maki, H. Hasegawa	Journal of Applied Phycology, Volume 31, No. 4, Pages 2669-2685	1	August, 2019	
IER-2019-021	Arsenic speciation and biotransformation by the marine macroalgae Undaria pinnatifida in seawater: A culture medium study	I.M.M. Rahman	M.A.A. Mamun, I.M.M. Rahman , R.R. Datta, C. Kosugi, A.S. Mashio, T. Maki, H. Hasegawa	Chemosphere, Volume 222, Pages 705-713	1	May, 2019	

IER-2019-020	Determination of multiple chelator complexes in aqueous matrices using ultra-performance liquid chromatography-quadrupole/time-of-flight mass spectrometry	I.M.M. Rahman	S. Miah, I.M.M. Rahman, M. Takemura, S. Fukiage, A.S. Mashio, T. Maki, H. Hasegawa	Talanta, Volume 194, Pages 980-990	1	March, 2019	
IER-2019-019	Leaching characteristics of radiocesium in municipal incineration ash and safety measures utilizing clay minerals	I.M.M. Rahman	N. Murasawa, H. Sawai, I.M.M. Rahman, T. Hatta	Journal of Environmental Conservation Engineering, Volume 48, No. 3, Pages 156-161	1	May, 2019	
IER-2019-018	Does open-beach ship-breaking affect the mineralogical composition of soil more adversely than typical industrial activities?	I.M.M. Rahman	I.M.M. Rahman, R. Mutsuddi, N. Jii, S. Barua, B. Ahmmad, M.G. Kibria, M.M. Hossain, Z.A. Begum, B.K. Dey, H. Hasegawa	Journal of Environmental Management, Volume 240, Pages 374-383	1	June, 2019	
IER-2019-017	Temporal trends of ¹³⁷Cs activity concentration in pond waters in the vicinity of Fukushima Dai-ichi nuclear power plant	Yoshifumi Wakiyama, Alexei Konoplev, Toshihiro Wada, Tsugiko Takase, Yasunori Igarashi, Kenji Nanba	Yoshifumi Wakiyama, Alexei Konoplev, Toshihiro Wada, Tsugiko Takase, Yasunori Igarashi, Kenji Nanba, Ian Byrnes	Proceedings of the International Association of Hydrological Sciences, Volume 381, Pages 101-106	1	2019	
IER-2019-016	Time changes of dose equivalent rate above the soil surface as indication of natural attenuation processes	Alexei Konoplev, Yoshifumi Wakiyama	Alexei V. Konoplev, Toshihiro Yoshihara, Yoshifumi Wakiyama	Proceedings of the International Association of Hydrological Sciences, Volume 381, Pages 121-126	1	2019	
IER-2019-015	Reconstruction of long-term dynamics of Chernobyl-derived ¹³⁷Cs in the Upa River using bottom sediments in the Scheckino reservoir and semi-empirical modelling	Alexei Konoplev	Alexei Konoplev, Maxim M. Ivanov, Valentin N. Golosov, Evgeniy A. Konstantinov	Proceedings of the International Association of Hydrological Sciences, Volume 381, Pages 95-99	1	2019	10.1007/s12562-018-1280-8
IER-2019-014	Strong contrast of cesium radioactivity between marine and freshwater fish in Fukushima	Toshihiro Wada, Alexei Konoplev, Yoshifumi Wakiyama, Kenji Nanba	Toshihiro Wada, Alexei Konoplev, Yoshifumi Wakiyama, Kenji Watanabe, Yuma Furuta, Daigo Morishita, Gyo Kawata, Kenji Nanba	Journal of Environmental Radioactivity, Volume 204, August 2019, Pages 132-142	1	August, 2019	10.1016/j.jenvrad.2019.04.006
IER-2019-013	Spatial and seasonal variations of radiocesium concentrations in an algae-grazing annual fish, ayu Plecoglossus altivelis collected from Fukushima Prefecture in 2014	Toshihiro Wada	Daigo Morishita, Toshihiro Wada, Takuji Noda, Atsushi Tomiya, Masahiro Enomoto, Toshiyuki Sato, Shunji Suzuki, Gyo Kawata	Fisheries Science, Volume 85, Issue 3, pp 561-569	1	May, 2019	10.1007/s12562-018-1280-8
IER-2019-012	fac-Bromido/chlorido(0.50/0.50)[3-carbamoyl-1-(1,10-phenanthrolin-2-ylmethyl)pyridinium-k2N,N'N'tricarbonylmanganese(II)0.46-bromide 0.51-chloride methanol monosolvate	Tsugiko Takase	Kosei Wadayama, Tsugiko Takase, Dai Oyama	IUCrDATA, Volume 4, Part 1	1	January, 2019	10.107/S2414314618017923
IER-2019-011	Synthesis of 2,6-di(1,8-naphthyridin-2-yl)pyridines functionalized at the 4-position: Building blocks for suitable metal complex-based dyes	Tsugiko Takase	Shunsuke Nakamura, Tsugiko Takase, Dai Oyama	Synthetic Communications, Volume 49, 2019 - Issue 11, Pages 1396-1405	1	2019	10.1080/00397911.2019.1597123
IER-2019-010	Assessment of gamma radiation from a limited area of forest floor using a cumulative personal dosimeter	Vasyl Yoschenko, Alexei Konoplev	Toshihiro Yoshihara, Keisuke Kurita, Hideyuki Matsumura, Vasyl Yoschenko, Naoki Kawachi, Shinnosuke Hashida, Alexei Konoplev, Hirohisa Yoshida	Journal of Environmental Radioactivity, Volume 204, August 2019, Pages 95-103	1	August, 2019	10.1016/j.jhydrol.2019.04.019
IER-2019-009	Dissolved ¹³⁷Cs concentrations in stream water and subsurface water in a forested headwater catchment after the Fukushima Dai-ichi Nuclear Power Plant accident	Vasyl Yoschenko	Sho Iwagami, Maki Tsujimura, Yuichi Onda, Ryohei Konuma, Yutaro Satou, Koichi Sakakibara, Vasyl Yoschenko	Journal of Hydrology, Volume 573, Pages 688-696	1	June, 2019	10.1016/j.jhydrol.2019.04.019
IER-2019-008	Mechanisms of radiocesium depuration in Sebastes cheni derived by simulation analysis of measured ¹³⁷Cs concentrations off southern Fukushima 2014-2016	Michio Aoyama	Takashi Ishimaru, Yutaka Tateda, Daisuke Tsumune, Michio Aoyama, Yasunori Hamajima, Nobue Kasamatsu, Manabu Yamada, Takashi Yoshimura, Takuji Mizuno, Jota Kanda	Journal of Environmental Radioactivity, Volume 203, Pages 200-209	1	July, 2019	10.1016/j.jenvrad.2019.03.012
IER-2019-007	A through year behavior of ¹³⁷Cs in a Japanese flowering cherry tree in relation to that of potassium	Vasyl Yoschenko	Toshihiro Yoshihara, Vasyl Yoschenko, Kenji Watanabe, Koji Keitoku	Journal of Environmental Radioactivity, Volume 202, Pages 32-40	1	June, 2019	10.1016/j.jenvrad.2019.01.013
IER-2019-006	¹³⁷Cs and Tritium Concentrations in Seawater off the Fukushima Prefecture: Results from the SOSO 5 Rivers Cruise (October 2014)	Michio Aoyama	Michio Aoyama, Hervé Thébaud, Y. Hamajima, Sabine Charmasson, Mireille Arnaud, Céline Duffa	Oceanography Challenges to Future Earth, Pages 407-409	1	2019	10.1007/978-3-030-00138-4_32
IER-2019-005	Phytoavailability of ¹³⁷Cs and stable Cs in soils from different parent materials in Fukushima, Japan	Hirofumi Tsukada	Sho Ogasawara, Tetsuya Eguchi, Atsushi Nakaoka, Shigeto Fujimura, Yoshihiko Takahashi, Hisaya Matsunami, Hirofumi Tsukada, Junta Yanai, Takuro Shinano	Journal of Environmental Radioactivity, Volume 198, Pages 117-125	1	March, 2019	10.1016/j.jenvrad.2018.12.028
IER-2019-004	The transfer of fallout plutonium from paddy soil to rice: A field study in Japan	Hirofumi Tsukada	Yoyui Ni, Zhongtang Wang, Jian Zheng, Keiko Tagami, Qiuju Guo,	Journal of Environmental Radioactivity, Volume 196, Pages 22-28	1	January, 2019	10.1016/j.jenvrad.2018.10.010
IER-2019-003	Artificial radionuclides	Michio Aoyama	Michio Aoyama	Encyclopedia of Ocean Sciences 3rd Edition, Volume 1, Pages 136-152	1	March, 2019	10.1016/B978-0-12-409548-9.10896-6
IER-2019-002	Concentration of radioactive materials in small mammals collected from a restricted area in Fukushima, Japan since 2012	Hiroko Ishiniwa	Hiroko Ishiniwa, Tsukasa Okano, Akira Yoshioka, Masanori Tamaoki,	Ecological Research, Volume 34, Issue 1, Pages 7-7	1	January, 2019	10.1111/1440-1703.1016

IER-2019-001	Radiocesium in North Pacific coastal and offshore areas of Japan within several months after the Fukushima accident	Michio Aoyama	Yuichiro Kumamoto, Masatoshi Yamada, <u>Michio Aoyama</u> , Yasunori Hamajima, Hideki Kaeriyama, Hisao Nagai, Takeyasu Yamagata, Akihiko Murata, Yukio Masumoto	Journal of Environmental Radioactivity, Volume 198, Pages 79-88	1	March, 2019	10.1016/j.jenvrad.2018.12.015
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