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1	Functionalization of the MoS <sub>2</sub> basal plane for activation of molecular hydrogen by Pd deposition	Fumihiko Ozaki, Shunsuke Tanaka, Wataru Osada, Kozo Mukai, Masafumi Horio, Takanori Koitaya, Susumu Yamamoto, Iwao Matsuda, Jun Yoshinobu	Applied Surface Science	593		153313	2022
2	Soft X-ray ptychography system using a Wolter mirror for achromatic illumination optics	Takashi Kimura, Yoko Takeo, Kai Sakurai, Noboru Furuya, Satoru Egawa, Gota Yamaguchi, Yusuke Matsuzawa, Takehiro Kume, Hidekazu Mimura, Mari Shimura, Haruhiko Ohashi, Iwao Matsuda, Yoshihisa Harada	Optics Express	30	15	26220-26228	2022
3	Materials Science Research by Ambient Pressure X-Ray Photoelectron Spectroscopy Systems at Synchrotron Radiation Facilities in Japan: Applications in Energy, Catalysis, and Sensors	Susumu Yamamoto, Yasumasa Takagi, Takanori Koitaya, Ryo Toyoshima, Masafumi Horio, Iwao Matsuda, Hiroshi Kondoh, Toshihiko Yokoyama & Jun Yoshinobu	Synchrotron Radiation News	35	3	19-25	2022
4	Operando resonant soft X-ray emission spectroscopy of LiMn <sub>2</sub> O <sub>4</sub> cathode using an aqueous electrolyte solution	Daisuke Asakura, Yusuke Nanba, Hideharu Niwa, Hisao Kiuchi, Jun Miyawaki, Masashi Okubo, Hirofumi Matsuda, Yoshihisa Harada, Eiji Hosono	Phys. Chem. Chem. Phys.	24		19177-19183	2022
5	Hole Dynamics in Photoexcited Hematite Studied with Femtosecond Oxygen K-edge X-ray Absorption Spectroscopy	Yohei Uemura, Ahmed S. M. Ismail, Sang Han Park, Soonam Kwon, Minseok Kim, Hebatalla Elnaggar, Federica Frati, Hiroki Wadati, Yasuyuki Hirata, Yujun Zhang, Kohei Yamagami, Susumu Yamamoto, Iwao Matsuda, Ufuk Halisdemir, Gertjan Koster, Christopher Milne, Markus Ammann, Bert M. Weckhuysen, and Frank M. F. de Groot	J. Phys. Chem. Lett.	13	19	4207-4214	2022
6	雰囲気軟 X 線光電子分光を用いた触媒表面反応のオペランド計測	山本達、小坂谷貴典、松田巖、吉信淳	放射光	35		182	2022
7	Electronic Structure of Carbon Dioxide in Sylgard-184 evaluated by using X-ray Emission Spectroscopy	Ryosuke Matsuno, Yokajaksusri Nutthon, Akira Miyano, Kakeru Ninomiya, Maiko Nishibori, Hisao Kiuchi, Shigenori Fujikawa, Yoshihisa Harada, Atsushi Takahara	Chem. Lett.	51	6	650-653	2022
8	Editorial: Interfacial Water : A Physical Chemistry Perspective, Volume II	Yoshihisa Harada	Front. Chem.	10		896586	2022
9	オペランド軟X線発光分光で見るリチウムイオン電池負極材料のコンバージョン反応	朝倉大輔、細野英司、原田慈久	電気化学	90	1	44660	2022
10	磁場中共鳴非弾性軟X線散乱によるハーフメタル型ホイスラー合金のスピニ偏極電子構造研究	藤原秀紀、梅津理恵、宮脇淳、原田慈久、菅滋正	放射光	35	2	78-87	2022
11	放射光を用いた固体高分子型燃料電池正極触媒のオペランド解析	尾嶋正治、原田慈久	燃料電池	21	3	44755	2022
12	6-GHz lattice response in a quantum spin-orbital liquid probed by time-resolved resonant x-ray scattering	Kou Takubo, Takashi Mizokawa, Huiyuan Man, Kohei Yamamoto, Yujun Zhang, Yasuyuki Hirata, Hiroki Wadati, Daniel I. Khomskii, Satoru Nakatsuji	Phys. Rev. B	104		205110	2021
13	Critical In-plane Density of Polyelectrolyte Brush for the Ordered Hydrogen-bonded Structure of Incorporated Water	Kosuke Yamazoe, Yuji Higaki, Yoshihiro Inutsuka, Jun Miyawaki, Atsushi Takahara, Yoshihisa Harada	Langmuir	38	10	3076-3081	2022
14	Interpretation of the x-ray emission spectra of liquid water through temperature and isotope dependence	Osamu Takahashi, Ryosuke Yamamura, Takashi Tokushima, Yoshihisa Harada	Phys. Rev.Lett.	128	8	086002	2022
15	Identification of Valence Electronic States Reflecting the Hydrogen Bonding in Liquid Ethanol	Ryosuke Yamamura, Kosuke Yamazoe, Jun Miyawaki, Yoshihisa Harada, Osamu Takahashi	J. Phys. Chem. B	126	5	1101-1107	2022
16	Hydration Mechanism in Blood-Compatible Polymers Undergoing Phase Separation	Daiki Murakami, Kosuke Yamazoe, Shin-nosuke Nishimura, Naoya Kurahashi, Tomoya Ueda, Jun Miyawaki, Yuka Ikemoto, Masaru Tanaka, Yoshihisa Harada	Langmuir	38	3	1090-1098	2022
17	Hydrogen Absorption and Diffusion Behaviors in Cube-Shaped Palladium Nanoparticles Revealed by Ambient-Pressure X-ray Photoelectron Spectroscopy	J. Tang, O. Seo, D. S. R. Rocabado, T. Koitaya, S. Yamamoto, Y. Nanba, C. Song, J. Kim, A. Yoshigoe, M. Koyama, S. Dekura, H. Kobayashi, H. Kitagawa, O. Sakata, I. Matsuda, J. Yoshinobu	Applied Surface Science	587		152797	2022

18	Growth of MoS <sub>2</sub> -Nb-doped MoS <sub>2</sub> lateral homojunctions: A monolayer p-n diode by substitutional doping	Mitsuhiro Okada, Naoka Nagamura, Tarojiro Matsumura, Yasunobu Ando, Anh Khoa Augustin Lu, Naoya Okada, Wen-Hsin Chang, Takeshi Nakanishi, Tetsuo Shimizu, Toshitaka Kubo, Toshifumi Irisawa, Takatoshi Yamada	APL Materials	9		121115(1-10)	2021
19	Fast and versatile polarization control of X-ray by segmented cross undulator at SPring-8	Jun Miyawaki, Susumu Yamamoto, Yasuyuki Hirata, Masafumi Horio, Yoshihisa Harada Iwao Matsuda	AAPPS Bulletin	31	25	44585	2021
20	Soft X-Ray Emission Studies on Hydrate-Melt Electrolytes	Tatau Shimada, Norio Takenaka, Eriko Watanabe, Yuki Yamada, Yi-Tao Cui, Yoshihisa Harada, Masashi Okubo, Atsuo Yamada	J. Phys. Chem. B	125	41	11534-11539	2021
21	Comparative Study of H <sub>2</sub> O and O <sub>2</sub> Adsorption on the GaN Surface	Masahiro Sato, Yuki Imazeki, Takahito Takeda, Masaki Kobayashi, Susumu Yamamoto, Iwao Matsuda, Jun Yoshinobu, Yoshiaki Nakano, Masakazu Sugiyama	The Journal of Physical Chemistry C	125	46	25807-25815	2021
22	Hydrogen-bonded structure of water in the loop of anchored polyrotaxane chain controlled by anchoring density	Keishi Akada, Kosuke Yamazoe, Jun Miyawaki, Rina Maeda, Kohzo Ito, Yoshihisa Harada	Frontiers in Chemistry	9		743255	2021
23	Detecting halfmetallic electronic structures of spintronic materials in a magnetic field	H. Fujiwara, R.Y. Umetsu, F. Kuroda, J. Miyawaki, T. Kashiuchi, K. Nishimoto, K. Nagai, A. Sekiyama, A. Irizawa, Y. Takeda, Y. Saitoh, T. Oguchi, Y. Harada, S. Suga	Scientific reports	11		18654	2021
24	A novel measurement approach for near-edge x-ray absorption fine structure: Continuous $2\pi$ angular rotation of linear polarization	Yoshiki Kudo, Yasuyuki Hirata, Masafumi Horio, Masahito Niibe, Iwao Matsuda	Nucl. Instrum. Methods Phys. Res. A	1018		165804	2021
25	Electronic Surface Reconstruction of TiO <sub>2</sub> Nanocrystals Revealed by Resonant Inelastic X-ray Scattering	Cheng-Hao Chuang, Chieh-Ming Chen, Yu-Cheng Shao, Ping-Hung Yeh, Chih-Ming Chang, Way-Faung Pong, Mukes Kapilashrami, Per-Anders Glans, Sheraz Gul, Gongming Wang, Yat Li, Jin Zhang, Jun Miyawaki, Hideharu Niwa, Yoshihisa Harada, Jin-Ming Chen, Jinghua Guo	Journal of Vacuum Science & Technology A	39	6	63204	2021
26	ビスマス薄膜を通して「見る」表面物理学の新展開	伊藤 俊, 松田 巖	日本物理学会誌	76	9	566-574	2021
27	Electronic structure of a borophene layer in rare-earth aluminum/chromium boride and its hydrogenated derivative, borophane	Masahito Niibe, Mathis Cameau, Nguyen Thanh Cuong, Omeji Ilemona Sunday, Xiaoni Zhang, Yuki Tsujikawa, Susumu Okada, Kunio Yubuta, Takahiro Kondo, and Iwao Matsuda	Phys. Rev. Materials	5	8	84007	2021
28	「計測インフォマティクスを応用したX線顕微分光によるナノ表面分析」	永村直佳, 松村太郎次郎, 永田賢二, 赤穂昭太郎, 安藤康伸	表面と真空	64	8	382-389	2021
29	【水】と機能性ポリマーに関する材料設計・最新応用, 第2章 第2節 "高分子内に入り込んだ水の電子状態観測"	倉橋直也, 山添康介	技術情報協会	2116		42-52	2021
30	Extreme Ultraviolet Second Harmonic Generation in a Polar Metal	Emma Berger*, Sasawat Jamnuch, Can B. Uzundal, Clarisse Woodahl, Hari Padmanabhan, Angelique Amado, Paul Manset, Yasuyuki Hirata, Yuya Kubota, Shigeki Owada, Kensuke Tono, Makina Yabashi, Cuixiang Wang, Youguo Shi, Venkatraman Gopalan, Craig P. Schwartz, Walter S. Drisdell, Iwao Matsuda, John W. Freeland, Tod A. Pascal, and Michael Zuerch	Nano Lett	21	14	6095-6101	2021
31	Spin-orbital liquid in Ba <sub>3</sub> CuSb <sub>2</sub> O <sub>9</sub> stabilized by oxygen holes	Kou Takubo, Huiyuan Man, Satoru Nakatsuji, Kohei Yamamoto, Yujun Zhang, Yasuyuki Hirata, Hiroki Wadati, Akira Yasui, Takashi Mizokawa, and Daniel I. Khomskii	Phys. Rev. Materials	5	7	75002	2021

32	A Global Shutter Wide Dynamic Range Soft X-Ray CMOS Image Sensor with Backside-Illuminated Pinned Photodiode, Two-Stage Lateral Overflow Integration Capacitor and Voltage Domain Memory Bank	Hiroya Shike, Rihito Kuroda, Ryota Kobayashi, Maasa Murata, Yasuyuki Fujihara, Manabu Suzuki, Shoma Harada, Taku Shibaguchi, Naoya Kuriyama, Takaki Hatsui, Jun Miyawaki, Tetsuo Harada, Yuichi Yamasaki, Takeo Watanabe, Yoshihisa Harada, Shigetoshi Sugawa	IEEE Transactions on Electron Device	68	4	2056-2063	2021
33	放射光オペランド計測の近未来：軟 X 線吸収・発光分光の発展と機能材料分析	原田慈久	精密工学会誌	87	1	34-38	2021
34	Spectrum adapted expectation-conditional maximization algorithm for extending high-throughput peak separation method in XPS analysis	Tarojiro Matsumura, Naoka Nagamura, Shotaro Akaho, Kenji Nagata, and Yasunobu Ando	Science and Technology of Advanced Materials(STAM) Methods	1		45-55	2021
35	2D boron: Boraphene, Borophene, Boronene	I. Matsuda and K. Wu ed.,	Springer				2021
36	Ion Selectivity of Water Molecules in Subnanoporous Liquid-Crystalline Water-Treatment Membranes: A Structural Study of Hydrogen Bonding	Ryusuke Watanabe, Takeshi Sakamoto, Kosuke Yamazoe, Jun Miyawaki, Takashi Kato, Yoshihisa Harada	Angew. Chem. Int. Ed	59	52	23461-23465	2020

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1	Structure and electronic structure of van der Waals interfaces at a Au(111) surface covered with a well-ordered molecular layer of n-alkanes	Hirota Mizushima, Harunobu Koike, Kenta Kuroda, Koichiro Yaji, Ayumi Harasawa, Yukiaki Ishida, Mitsuhiro Nakayama, Kazuhiko Mase, Kozo, Mukai, Tatsuya Kitazawa, Takeshi Kondo, Jun Yoshinobu, Shik Shin, Kaname Kanai	Applied Surface Science	535		147673	2021
2	Evidence for a higher-order topological insulator in a three-dimensional material built from van der Waals stacking of bismuth-halide chains.	Ryo Noguchi, Masaru Kobayashi, Zhanzhi Jiang, Kenta Kuroda, Takanari Takahashi, Zifan Xu, Daehun Lee, Motoaki Hirayama, Masayuki Ochi, Tetsuroh Shirasawa, Peng Zhang, Chun Lin, Cédric Bareille, Shunsuke Sakuragi, Hiroaki Tanaka, So Kunisada, Kifu Kurokawa, Koichiro Yaji, Ayumi Harasawa, Viktor Kandyba, Alessio Giampietri, Alexei Barinov, Timur K. Kim, Cephise Cacho, Makoto Hashimoto, Donghui Lu, Shik Shin, Ryotaro Arita, Keji Lai, Takao Sasagawa, Takeshi Kondo	Nature Materials	20		473	2021
3	Observation and control of the weak topological insulator state in $ZrTe_5$	Peng Zhang, Ryo Noguchi, Kenta Kuroda, Chun Lin, Kaishu Kawaguchi, Koichiro Yaji, Ayumi Harasawa, Mikk Lippmaa, Simin Nie, Hongming Weng, V. Kandyba, A. Giampietri, A. Barinov, Qiang Li, G. D. Gu, Shik Shin & Takeshi Kondo	Nature Comm.	12		406	2021
4	Visualization of the strain-induced topological phase transition in a quasi-one-dimensional superconductor $TaSe_3$	Chun Lin, Masayuki Ochi, Ryo Noguchi, Kenta Kuroda, Masahito Sakoda, Atsushi Nomura, Masakatsu Tsubota, Peng Zhang, Cedric Bareille, Kifu Kurokawa, Yosuke Arai, Kaishu Kawaguchi, Hiroaki Tanaka, Koichiro Yaji, Ayumi Harasawa, Makoto Hashimoto, Donghui Lu, Shik Shin, Ryotaro Arita, Satoshi Tanda & Takeshi Kondo	Nature Materials	20		1093	2021
5	Scaling law for Rashba-type spin splitting in quantum-well films.	Ryo Noguchi, Kenta Kuroda, Mitsuaki Kawamura, Koichiro Yaji, Ayumi Harasawa, Takushi Iimori, Shik Shin, Fumio Komori, Taisuke Ozaki, and Takeshi Kondo.	Physical Review B	104		L180409	2021