

The top CRISMAT articles with a higher IF during 2015-2020

Around 650 papers were published during 2015-2020, and more than 10% appeared in Journals with an Impact Factor (IF) greater than 10. Some examples :

With an IF= 46.86, 3 articles published in Nature Materials:

One-pot synthesis of silanol-free nanosized MFI zeolite

By: Grand, J; Talapaneni, SN; Vicente, A; Fernandez, C; Dib, E; Aleksandrov, HA; Vayssilov, GN; Retoux, R; Boullay, P ; Gilson, JP; Valtchev, V, ; Mintova, S – NATURE MATERIALS 2017, 16 (30), <https://doi.org/10.1038/NMAT4941>

A new active Li-Mn-O compound for high energy density Li-ion batteries

By: Freire, M; Kosova, NV; Jordy, C; Chateigner, D; Lebedev, OI; Maignan, A; Pralong, V – NATURE MATERIALS 2016, 15 (2) 173, <https://doi.org/10.1038/NMAT4479>

Template-free nanosized faujasite-type zeolites

By: Awala, H; Gilson, JP; Retoux, R; Boullay, P; Goupil, JM; Valtchev, V; Mintova, S – NATURE MATERIALS 2015, 14 (4) 447-451, <https://doi.org/10.1038/NMAT4173>

With an IF= 43.65, 1 article published in Science:

Hydrogen positions in single nanocrystals revealed by electron diffraction

By: Palatinus, L; Brazda, P; Boullay, P; Perez, O; Klementova, M; Petit, S; Eigner, V; Zaarour, M ; Mintova, S – SCIENCE 2017, 355 (6321) 166-169 <https://doi.org/10.1126/science.aak9652>

With an IF= 32.82, 1 article published in Energy & Environmental Science:

Measuring thermoelectric transport properties of materials

By: Borup, KA; de Boor, J; Wang, H; Drymiotis, F; Gascoin, F; Shi, X; Chen, LD; Fedorov, MI; Muller, E; Iversena, BB; Snyder, GJ – ENERGY & ENVIRONMENTAL SCIENCE 2015, 8 (2) 423-435 <https://doi.org/10.1039/c4ee01320d>

With an IF= 24.79, 3 articles published in Advanced Materials:

Chemical Strain Engineering of Magnetism in Oxide Thin Films

By: Copie, O; Varignon, J; Rotella, H; Steciuk, G; Boullay, P; Pautrat, A; David, A; Mercey, B; Ghosez, P; Prellier, W – ADVANCED MATERIALS 2017, 29 (22)
<https://doi.org/10.1002/adma.201604112>

Universal Fabrication of 2D Electron Systems in Functional Oxides

By: Rodel, TC; Fortuna, F; Sengupta, S; Frantzeskakis, E; Le Fevre, P; Bertran, F; Mercey, B; Matzen, S ; Agnus, G ; Maroutian, T; Lecoeur, P; Santander-Syro, AF – ADVANCED MATERIALS 2016, 28 (10) 1976-1980,
<https://doi.org/10.1002/adma.201505021>

High-Pressure Synthesis of Boron-Doped Ultrasmall Diamonds from an Organic Compound

By: Ekimov, EA; Kudryavtsev, OS; Khomich, AA; Lebedev, OI ; Dolenko, TA; Vlasov, II- ADVANCED MATERIALS 2015, 27 (37) 5518-5522,
<https://doi.org/10.1002/adma.201502672>

With an IF= 21.92, 3 articles published in Advanced Energy Materials:

Li₂O:Li-Mn-O Disordered Rock-Salt Nanocomposites as Cathode Prelithiation Additives for High-Energy Density Li-Ion Batteries.

By : Diaz-Lopez, M; Chater, P. A.; Bordet, P.; Freire, M.; Jordy, C.; Lebedev, O.; Pralong, V. - ADVANCED ENERGY MATERIALS 2020, 10 (7), 1902788.
<https://doi.org/10.1002/aenm.201902788>.

MnO₂ Thin Films on 3D Scaffold: Microsupercapacitor Electrodes Competing with "Bulk" Carbon Electrodes

By: Eustache, E; Douard, C; Retoux, R; Lethien, C; Brousse, T- ADVANCED ENERGY MATERIALS 2015, 5 (18) 1500680
<https://doi.org/10.1002/aenm.201500680>

High Power Factors of Thermoelectric Colusites Cu₂₆T₂Ge₆S₃₂ (T = Cr, Mo, W): Toward Functionalization of the Conductive "Cu-S" Network

By: Kumar, VP; Supka, AR; Lemoine, P; Lebedev, OI; Raveau, B ; Suekuni, K ; Nassif, V; Al Orabi, RA; Fornari, M; Guilmeau, E- ADVANCED ENERGY MATERIALS 2019, 9 (6) 1803249, <https://doi.org/10.1002/aenm.201803249>

With an IF=14.5, 4 articles published in Advanced Functional Materials:

XBi₄S₇ (X = Mn, Fe): New Cost-Efficient Layered n-Type Thermoelectric Sulfides with Ultralow Thermal Conductivity

By: Labégorre, JB; Virfeu, A; Bourhim, A; Willeman, H; Barbier, T; Appert, F; Juraszek, J; Malaman, B; Huguenot, A; Gautier, R; Nassif, V; Lemoine, P; Prestipino, C; Elkaim, E; Pautrot-d'Alençon, L; Le Mercier, T; Maignan, A; Al Orabi, RA; Guilmeau, E – ADVANCED FUNCTIONAL MATERIALS 2019, 29 (48) 1904112, <https://doi.org/10.1002/adfm.201904112>

Designing of a Magnetodielectric System in Hybrid Organic-Inorganic Framework, a Perovskite Layered Phosphonate $MnO_3PC_6H_4-m-Br.H_2O$

By: Basu, T; Bloyet, C; Beaubras, F; Caignaert, V; Perez, O; Rueff, JM; Pautrat, A; Raveau, B; Lohier, JF; Jaffres, PA; Couthon, H; Rogez, G; Taupier, G; Dorkenoo, H – ADVANCED FUNCTIONAL MATERIALS 2019, 29 (43) 190878
<https://doi.org/10.1002/adfm.201901878>

Layered Simple Hydroxides Functionalized by Fluorene-Phosphonic Acids: Synthesis, Interface Theoretical Insights, and Magnetoelectric Effect

By: Evrard, Q; Chaker, Z; Roger, M; Sevrain, CM; Delahaye, E; Gallart, M; Gilliot, P; Leuvre, C; Rueff, JM; Rabu, P; Massobrio, C; Boero, M; Pautrat, A; Jaffres, PA; Ori, G; Rogez, G – ADVANCED FUNCTIONAL MATERIALS 2017, 27 (41) 1703576, <https://doi.org/10.1002/adfm.201703576>

Size-Induced Switching of Nanowire Growth Direction: a New Approach Toward Kinked Nanostructures

By: Shen, YD; Lebedev, OI; Turner, S; Van Tendeloo, G; Song, XH; Yu, XC; Wang, QJ; Chen, HY; Dayeh, SA; Wu, T – ADVANCED FUNCTIONAL MATERIALS 2016, 26 (21) 3687-3695, <https://doi.org/10.1002/adfm.201600142>

With an IF= 14.49, 5 articles published in Journal of American Chemical Society:

Excellent Semiconductors Based on Tetracenotetracene and Pentacenopentacene: From Stable Closed-Shell to Singlet Open-Shell

By: Jousselin-Oba, T; Mamada, M; Marrot, J; Maignan, A; Adachi, C; Yassar, A; Frigoli, M – JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 2019, 141 (23) 9373-9381, <https://doi.org/10.1021/jacs.9b03488>

Direct Evidence for Single Molybdenum Atoms Incorporated in the Framework of MFI Zeolite Nanocrystals

By: Dubray, F; Moldovan, S; Kouvatias, C; Grand, J; Aquino, C; Barrier, N; Gilson, JP; Nesterenko, N; Minoux, D; Mintova, S - JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 2019, 141 (22) 8689-8693
<https://doi.org/10.1021/jacs.9b02589>

High-Performance Thermoelectric Bulk Colusite by Process Controlled Structural Disorder

By: Bourges, C; Bouyrie, Y; Supka, AR; Al Orabi, RA; Lemoine, P; Lebedev, OI; Ohta, M; Suekuni, K; Nassif, V; Hardy, V; Daou, R; Miyazaki, Y; Fornari, M; Guilmeau, E - JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 2018, 140 (6) 2186-2195, <https://doi.org/10.1021/jacs.7b11224>

Comprehensive Study of Oxygen Storage in $YbFe_2O_{4+x}$ ($X \leq 0.5$): Unprecedented Coexistence of FeO_n Polyhedra in One Single Phase

By: Nicoud, S; Huve, M; Hernandez, O; Pautrat, A; Duttine, M; Wattiaux, A; Colin, C; Kabbour, H; Mentre, O - JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 2017, 139 (47) 17031-17043, <https://doi.org/10.1021/jacs.7b06409>

Intricate Short-Range Ordering and Strongly Anisotropic Transport Properties of $Li_{1-x}Sn_{2+x}As_2$

By: Lee, K; Kaseman, D; Sen, S; Hung, I; Gan, ZH; Gerke, B; Pottgen, R; Feyngenson, M; Neufeind, J; Lebedev, OI; Kovnir, K - JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 2015, 137 (10) 3622-3630
<https://doi.org/10.1021/jacs.5b00237>

With an IF= 13.97, 2 articles published in Nano Letters:

Novel Layered Supercell Structure from Bi_2AlMnO_6 for Multifunctionalities

By: Li, LG; Boullay, P; Lu, P; Wang, XJ; Jian, J; Huang, JJ; Gao, XY; Misra, S; Zhang, WR; Perez, O; Steciuk, G; Chen, AP; Zhang, XH; Wang, HY – NANO LETTERS 2017, 17 (11) 6575-6582
<https://doi.org/10.1021/acs.nanolett.7b02284>

Dimensionality Controlled Octahedral Symmetry-Mismatch and Functionalities in Epitaxial $LaCoO_3/SrTiO_3$ Heterostructures

By: Qiao, L; Jang, JH; Singh, DJ; Gai, Z; Xiao, HY; Mehta, A; Vasudevan, RK; Tselev, A; Feng, ZX; Zhou, H; Li, SA; Prellier, W; Zu, XT; Liu, ZJ; Borisevich, A; Baddorf, AP; Biegalski, MD - Wang, HY – NANO LETTERS 2015, 15 (7) 4677-4684, <https://doi.org/10.1021/acs.nanolett.5b01471>

With an IF=13.81, 2 articles published in Nature Communications:

Origin of Ising magnetism in $Ca_3Co_2O_6$ unveiled by orbital imaging

By: Leedahl, B; Sundermann, M; Amorese, A; Severing, A; Gretarsson, H; Zhang, LY; Komarek, AC; Maignan, A; Haverkort, MW; Tjeng, LH – NATURE COMMUNICATIONS 2019, 10, 5447, <https://doi.org/10.1038/s41467-019-13273-4>

Interface-based tuning of Rashba spin-orbit interaction in asymmetric oxide heterostructures with 3d electrons

By: Lin, WN; Li, L; Dogan, F; Li, CJ; Rote, H; Yu, XJ; Zhang, BM; Li, YY; Lew, WS; Wang, SJ; Prellier, W; Pennycook, SJ; Chen, JS; Zhong, ZC; Manchon, A; Wu, T- NATURE COMMUNICATIONS 2019, 10, 3052
<https://doi.org/10.1038/s41467-019-10961-z>