

# ESI Highly Cited Papers in September 2023

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1. [Surface brightens up Si quantum dots: direct bandgap-like size-tunable emission](#)  
Kateřina Dohnalová, Alexander N Poddubny, Alexei A Prokofiev, Wieteke DAM de Boer, Chinnaswamy P Umesh, Jos MJ Paulusse, Han Zuilhof & Tom Gregorkiewicz  
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2. [Highly efficient GaAs solar cells by limiting light emission angle](#)  
Emily D Kosten, Jackson H Atwater, James Parsons, Albert Polman & Harry A Atwater  
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3. [New yellow Ba<sub>0.93</sub>Eu<sub>0.07</sub>Al<sub>2</sub>O<sub>4</sub> phosphor for warm-white light-emitting diodes through single-emitting-center conversion](#)  
Xufan Li, John D Budai, Feng Liu, Jane Y Howe, Jiahua Zhang, Xiao-Jun Wang, Zhanjun Gu, Chengjun Sun, Richard S Meltzer & Zhengwei Pan  
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Lingling Huang, Xianzhong Chen, Benfeng Bai, Qiaofeng Tan, Guofan Jin, Thomas Zentgraf & Shuang Zhang  
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Xingjie Ni, Satoshi Ishii, Alexander V Kildishev & Vladimir M Shalaev  
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6. [Plasmonics for solid-state lighting: enhanced excitation and directional emission of highly efficient light sources](#)  
Gabriel Lozano, Davy J Louwers, Said RK Rodríguez, Shunsuke Murai, Olaf TA Jansen, Marc A Verschuuren & Jaime Gómez Rivas  
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Chaoyu Xiang, Wonhoe Koo, Franky So, Hisahiro Sasabe & Junji Kido  
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Xi Chen, Baohua Jia, Yinan Zhang & Min Gu  
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Arif E Cetin, Ahmet F Coskun, Betty C Galarreta, Min Huang, David Herman, Aydogan Ozcan & Hatice Altug  
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Francesca Pincella, Katsuhiko Isozaki & Kazushi Miki  
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Ji Hye Oh, Su Ji Yang & Young Rag Do  
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Koji Sugioka & Ya Cheng  
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14. [Metallic nanostructures for light trapping in energy-harvesting devices](#)  
Chuan Fei Guo, Tianyi Sun, Feng Cao, Qian Liu & Zhifeng Ren  
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15. [Adaptive optical microscopy: the ongoing quest for a perfect image](#)  
Martin J Booth  
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Ebrahim Karimi, Sebastian A Schulz, Israel De Leon, Hammam Qassim, Jeremy Upham & Robert W Boyd  
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Min Gu, Xiangping Li & Yaoyu Cao  
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18. [Light scattering and surface plasmons on small spherical particles](#)  
Xiaofeng Fan, Weitao Zheng & David J Singh  
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19. [Design and fabrication of broadband ultralow reflectivity black Si surfaces by laser micro/nanoprocessing](#)  
Jing Yang, Fangfang Luo, Tsung Sheng Kao, Xiong Li, Ghim Wei Ho, Jinghua Teng, Xiangang Luo & Minghui Hong  
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Zichen Zhang, Zheng You & Daping Chu  
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22. [Observation of efficient population of the red-emitting state from the green state by non-multiphonon relaxation in the Er<sup>3+</sup>-Yb<sup>3+</sup> system](#)  
Jiahua Zhang, Zhendong Hao, Jing Li, Xia Zhang, Yongshi Luo & Guohui Pan  
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23. [Massive individual orbital angular momentum channels for multiplexing enabled by Dammann gratings](#)  
Ting Lei, Meng Zhang, Yuru Li, Ping Jia, Gordon Ning Liu, Xiaogeng Xu, Zhaohui Li, Changjun Min, Jiao Lin, Changyuan Yu, Hanben Niu & Xiaocong Yuan  
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Jun Zhang, Mark A Itzler, Hugo Zbinden & Jian-Wei Pan  
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Xiaohui Ling, Xinxing Zhou, Xunong Yi, Weixing Shu, Yachao Liu, Shizhen Chen, Hailu Luo, Shuangchun Wen & Dianyuan Fan  
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27. [Optical tuning of exciton and trion emissions in monolayer phosphorene](#)  
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28. [Broadband diffusion of terahertz waves by multi-bit coding metasurfaces](#)  
Li-Hua Gao, Qiang Cheng, Jing Yang, Shao-Jie Ma, Jie Zhao, Shuo Liu, Hai-Bing Chen, Qiong He, Wei-Xiang Jiang, Hui-Feng Ma, Qi-Ye Wen, Lan-Ju Liang, Biao-Bing Jin, Wei-Wei Liu, Lei Zhou, Jian-Quan Yao, Pei-Heng Wu & Tie-Jun Cui  
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Wujiong Sun, Qiong He, Shulin Sun & Lei Zhou  
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33. [Anisotropic coding metamaterials and their powerful manipulation of differently polarized terahertz waves](#)  
Shuo Liu, Tie Jun Cui, Quan Xu, Di Bao, Liangliang Du, Xiang Wan, Wen Xuan Tang, Chunmei Ouyang, Xiao Yang Zhou, Hao Yuan, Hui Feng Ma, Wei Xiang Jiang, Jiaguang Han, Weili Zhang & Qiang Cheng  
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34. [Energy transfer in plasmonic photocatalytic composites](#)  
Xiang-Chao Ma, Ying Dai, Lin Yu & Bai-Biao Huang  
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35. [A single Eu<sup>2+</sup>-activated high-color-rendering oxychloride white-light phosphor for white-light-emitting diodes](#)  
Peng-Peng Dai, Cong Li, Xin-Tong Zhang, Jun Xu, Xi Chen, Xiu-Li Wang, Yan Jia, Xiaojun Wang & Yi-Chun Liu  
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36. [Supra-\(carbon nanodots\) with a strong visible to near-infrared absorption band and efficient photothermal conversion](#)  
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Le Wang, Rong-Jun Xie, Yuanqiang Li, Xiaojun Wang, Chong-Geng Ma, Dong Luo, Takashi Takeda, Yi-Ting Tsai, Ru-Shi Liu & Naoto Hirotsuki  
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40. [Information entropy of coding metasurface](#)  
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41. [Control over emissivity of zero-static-power thermal emitters based on phase-changing material GST](#)  
Kai-Kai Du, Qiang Li, Yan-Biao Lyu, Ji-Chao Ding, Yue Lu, Zhi-Yuan Cheng & Min Qiu  
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42. [Tomographic flow cytometry by digital holography](#)  
Francesco Merola, Pasquale Memmolo, Lisa Miccio, Roberto Savoia, Martina Mugnano, Angelo Fontana, Giuliana D'Ippolito, Angela Sardo, Achille Iolascon, Antonella Gambale & Pietro Ferraro  
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43. [Quantification of light-enhanced ionic transport in lead iodide perovskite thin films and its solar cell applications](#)  
Yi-Cheng Zhao, Wen-Ke Zhou, Xu Zhou, Kai-Hui Liu, Da-Peng Yu & Qing Zhao  
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44. [Parametric down-conversion photon-pair source on a nanophotonic chip](#)  
Xiang Guo, Chang-ling Zou, Carsten Schuck, Hojoong Jung, Risheng Cheng & Hong X Tang  
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45. [Generation of wavelength-independent subwavelength Bessel beams using metasurfaces](#)  
Wei Ting Chen, Mohammadreza Khorasaninejad, Alexander Y. Zhu, Jaewon Oh, Robert C. Devlin, Aun Zaidi & Federico Capasso  
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Dongliang Gao, Weiqiang Ding, Manuel Nieto-Vesperinas, Xumin Ding, Mahdy Rahman, Tianhang Zhang, ChweeTeck Lim & Cheng-Wei Qiu  
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Hai-Wei Chen, Rui-Dong Zhu, Juan He, Wei Duan, Wei Hu, Yan-Qing Lu, Ming-Chun Li, Seok-Lyul Lee, Ya-Jie Dong & Shin-Tson Wu  
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51. [Beam switching and bifocal zoom lensing using active plasmonic metasurfaces](#)  
Xinghui Yin, Tobias Steinle, Lingling Huang, Thomas Taubner, Matthias Wuttig, Thomas Zentgraf & Harald Giessen  
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Lan Jiang, An-Dong Wang, Bo Li, Tian-Hong Cui & Yong-Feng Lu  
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Yair Rivenson, Yibo Zhang, Harun Günaydin, Da Teng & Aydogan Ozcan  
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Manuel Erhard, Robert Fickler, Mario Krenn & Anton Zeilinger  
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56. [Giant intrinsic chiro-optical activity in planar dielectric nanostructures](#)  
Alexander Y Zhu, Wei Ting Chen, Aun Zaidi, Yao-Wei Huang, Mohammadreza Khorasaninejad, Vyshakh Sanjeev, Cheng-Wei Qiu & Federico Capasso  
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Tim Senden, Relinde J.A. van Dijk-Moes & Andries Meijerink  
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60. [Gold-patched graphene nano-stripes for high-responsivity and ultrafast photodetection from the visible to infrared regime](#)  
Semih Cakmakyapan, Ping Keng Lu, Aryan Navabi & Mona Jarrahi  
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63. [All-optical active THz metasurfaces for ultrafast polarization switching and dynamic beam splitting](#)  
Longqing Cong, Yogesh Kumar Srivastava, Huifang Zhang, Xueqian Zhang, Jiaguang Han & Ranjan Singh  
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Yan-Min Yang, Zhi-Yong Li, Jun-Ying Zhang, Yue Lu, Shao-Qiang Guo, Qing Zhao, Xin Wang, Zi-Jun Yong, Hong Li, Ju-Ping Ma, Yoshihiro Kuroiwa, Chikako Moriyoshi, Li-Li Hu, Li-Yan Zhang, Li-Rong Zheng & Hong-Tao Sun  
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Ruizhe Zhao, Basudeb Sain, Qunshuo Wei, Chengchun Tang, Xiaowei Li, Thomas Weiss, Lingling Huang, Yongtian Wang & Thomas Zentgraf  
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75. [Interference-assisted kaleidoscopic meta-plexer for arbitrary spin-wavefront manipulation](#)  
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78. [New strategy for designing orangish-red-emitting phosphor via oxygen-vacancy-induced electronic localization](#)  
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82. [Emerging ultra-narrow-band cyan-emitting phosphor for white LEDs with enhanced color rendition](#)  
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84. [3D Janus plasmonic helical nanoapertures for polarization-encrypted data storage](#)  
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