

## Innovations in Bioengineering Virtual Special Issue

Cite This: *ACS Mater. Au* 2023, 3, 569–570

Read Online

ACCESS |

Metrics &amp; More

Article Recommendations

Inspired by last year's *ACS Materials Au* and *JACS Au* Webinar: [Innovators in Bioengineering](#), we have assembled a virtual special issue in *ACS Materials Au* highlighting contributions from many of the leaders in the field.<sup>1</sup> The webinar featured talks from Prof. Molly Stevens and Prof. Ali Khademhosseini and is available on demand ([go.acs.org/OV](https://go.acs.org/OV)). As highlighted in Figure 1, this new virtual special issue includes papers on antimicrobials,<sup>2</sup> gene and therapeutic delivery,<sup>3–5</sup> model systems and organs on a chip,<sup>6–8</sup> biomineralization and biopolymer synthesis,<sup>9,10</sup> regenerative medicine and scaffolds for tissue engineering,<sup>11–20</sup> and sensors.<sup>21,22</sup> Our authors come from around the world—Australia, Brazil, Canada, China, Germany, India, Iran, Israel, Italy, Japan, Poland, Portugal, Singapore, Spain, Switzerland, and the United States—and include leaders in the field alongside quite a number of rising stars. We were delighted with the insights revealed in this collection of papers. We hope that you read these papers to learn about this thriving field, and find new inspiration.

It is an honor to glimpse and to share these views of the future of the field. There is a bright future for materials in bioengineering. We hope that this collection motivates you and others to look for opportunities to address unsolved problems in medicine and the eco-sphere with innovative bioengineering solutions.<sup>23</sup>

We continue looking for further innovations in bioengineering to publish on these pages. Please do not hesitate to reach out to our editors with your work, or to submit manuscripts directly to *ACS Materials Au*, a fully open access journal publishing high-quality research at the forefront of fundamental and applied research, and at the interface between materials and other disciplines, as exemplified in this virtual special issue. This journal is gold open access, Plan S compliant, and indexed in Web of Science, Scopus, and the [Directory of Open Access Journals](#) (DOAJ).

We sincerely thank all the authors of these articles, the reviewers for their time and contributions, and the journal staff who helped gather them together.

Sincerely yours,

Stephanie L. Brock, Deputy Editor, *ACS Materials Au* [orcid.org/0000-0002-0439-302X](https://orcid.org/0000-0002-0439-302X)

Maryam Badv [orcid.org/0000-0003-2226-3533](https://orcid.org/0000-0003-2226-3533)

Ali Khademhosseini

Paul S. Weiss [orcid.org/0000-0001-5527-6248](https://orcid.org/0000-0001-5527-6248)

## AUTHOR INFORMATION

Complete contact information is available at:

<https://pubs.acs.org/10.1021/acsmaterialsau.3c00089>

## Notes

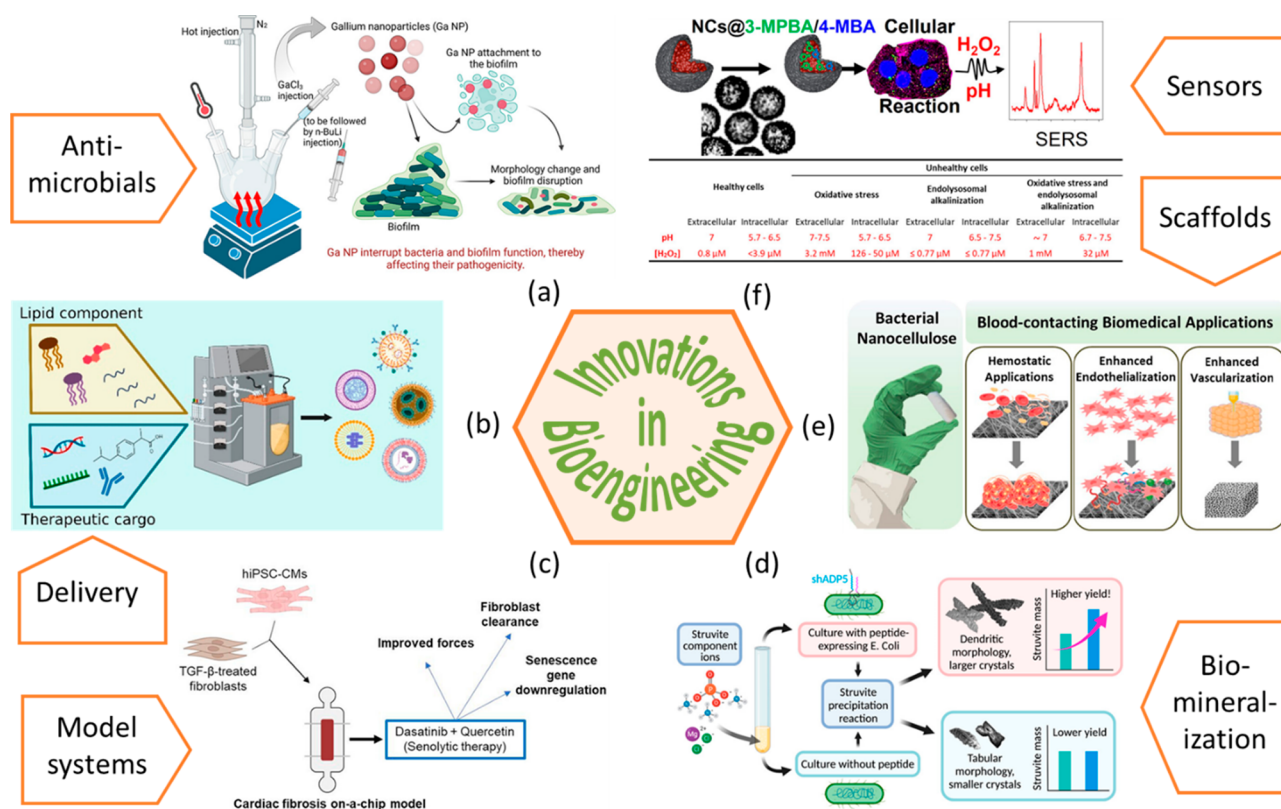
Views expressed in this editorial are those of the authors and not necessarily the views of the ACS.

## REFERENCES

- (1) Brock, S. L.; Badv, M.; Khademhosseini, A.; Weiss, P. S. *ACS Materials Au* 2022, 2 (4), 381–381.
- (2) Limantoro, C.; Das, T.; He, M.; Dirin, D.; Manos, J.; Kovalenko, M. V.; Chrzanowski, W. *ACS Materials Au* 2023, 3 (4), 310–320.
- (3) Bernards, D. A.; Ma, C. J.; Zhang, Y.; Rodriguez, T. M.; Dickson, J.; Kharbikar, B. N.; Bhisitkul, R. B.; Desai, T. A. *ACS Materials Au* 2023, 3 (3), 255–264.
- (4) Lin, J.; Wang, X.; Ni, D.; Chen, Y.; Chen, C.; Liu, Y. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00035](https://doi.org/10.1021/acsmaterialsau.3c00035).
- (5) Mehta, M.; Bui, T. A.; Yang, X.; Aksoy, Y.; Goldys, E. M.; Deng, W. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00032](https://doi.org/10.1021/acsmaterialsau.3c00032).
- (6) Yu, Z. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00046](https://doi.org/10.1021/acsmaterialsau.3c00046).
- (7) Mourad, O.; Mastikhina, O.; Khan, S.; Sun, X.; Hatkar, R.; Williams, K.; Nunes, S. S. *ACS Materials Au* 2023, 3 (4), 360–370.
- (8) Smith, L. J.; Skirzynska, A.; Chin, A. A.; Arnold, A. E.; Kushida, M.; Dirks, P. B.; Shoichet, M. S. *ACS Materials Au* 2023, 3 (5), 514–527.
- (9) Hostert, J. D.; Spitzer, Q. A.; Giammattei, P.; Renner, J. N. *ACS Materials Au* 2023, 3 (5), 548–556.
- (10) Beaver, K.; Dantanarayana, A.; Liou, W.; Babst, M.; Minter, S. D. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00059](https://doi.org/10.1021/acsmaterialsau.3c00059).
- (11) Eliahoo, P.; Setayesh, H.; Hoffman, T.; Wu, Y.; Li, S.; Treweek, J. B. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00038](https://doi.org/10.1021/acsmaterialsau.3c00038).
- (12) Yadav, P.; Shah, R.; Roy, A.; Jani, S.; Chatterjee, K.; Saini, D. K. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00057](https://doi.org/10.1021/acsmaterialsau.3c00057).
- (13) Zakrzewska, A.; Zargarian, S. S.; Rinoldi, C.; Gradys, A.; Jarzabek, D.; Zanon, M.; Gualandi, C.; Lanzi, M.; Pierini, F. *ACS Materials Au* 2023, 3 (5), 464–482.
- (14) de Oliveira, I. R.; dos Santos Goncalves, I.; Wallace dos Santos, K.; Lanca, M. C.; Vieira, T.; Carvalho Silva, J.; Cengiz, I. F.; Reis, R. L.; Oliveira, J. M.; Miranda Ribeiro Borges, J. P. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00048](https://doi.org/10.1021/acsmaterialsau.3c00048).
- (15) Teo, Y. C.; Abbas, A.; Park, E. J.; Barbut, C.; Guo, J.; Goh, D.; Yeong, J. P. S.; Mok, W. L. J.; Teo, P. *ACS Materials Au* 2023, 3 (3), 265–272.
- (16) Rinoldi, C.; Kijenska-Gawronska, E.; Heljak, M.; Jaroszewicz, J.; Kaminski, A.; Khademhosseini, A.; Tamayol, A.; Swieszkowski, W. *ACS Materials Au* 2023, DOI: [10.1021/acsmaterialsau.3c00012](https://doi.org/10.1021/acsmaterialsau.3c00012).

Published: November 8, 2023





**Figure 1.** Cross section of Table of Contents images from the Virtual Special Issue of *ACS Materials Au* on *Innovations in Bioengineering*. Clockwise from upper left: (a) C. Limantoro, T. Das, M. He, D. Dirin, J. Manos, M. V. Kovalenko, W. Chrzanowski “Synthesis of Antimicrobial Gallium Nanoparticles Using the Hot Injection Method”; (b) M. Mehta, T. A. Bui, X. Yang, Y. Aksoy, E. M. Goldys, W. Deng “Lipid-Based Nanoparticles for Drug/Gene Delivery: An Overview of the Production Techniques and Difficulties Encountered in Their Industrial Development”; (c) O. Mourad, O. Mastikhina, S. Khan, X. Sun, R. Hatkar, K. Williams, S. S. Nunes “Antisenescence Therapy Improves Function in a Human Model of Cardiac Fibrosis-on-a-Chip”; (d) J. D. Hostert, Q. A. Spitzer, P. Giammattei, J. N. Renner “Scalable Production of Peptides for Enhanced Struvite Formation via Expression on the Surface of Genetically Engineered Microbes”; (e) E. L. Roberts, S. Abdollahi, F. Oustadi, E. D. Stephens, M. Badv “Bacterial-Nanocellulose-Based Biointerfaces and Biomimetic Constructs for Blood-Contacting Medical Applications” (f) C. Xiao, V. Izquierdo-Roca, P. Rivera-Gil “Real Time and Spatiotemporal Quantification of pH and H<sub>2</sub>O<sub>2</sub> Imbalances with a Multiplex Surface-Enhanced Raman Spectroscopy Nanosensor”.

(17) Shen, J.; Yuan, W.; Badv, M.; Moshaverinia, A.; Weiss, P. S. *ACS Materials Au* **2023**, *3* (5), 540–547.

(18) Abtahi, S.; Chen, X.; Shahabi, S.; Nasiri, N. *ACS Materials Au* **2023**, *3* (5), 394–417.

(19) Roberts, E. L.; Abdollahi, S.; Oustadi, F.; Stephens, E. D.; Badv, M. *ACS Materials Au* **2023**, *3* (5), 418–441.

(20) Shibahara, K.; Hayashi, K.; Nakashima, Y.; Ishikawa, K. *ACS Materials Au* **2023**, *3* (4), 321–336.

(21) Xiao, C.; Izquierdo-Roca, V.; Rivera-Gil, P. *ACS Materials Au* **2023**, *3* (2), 164–175.

(22) Solomonov, A.; Kozell, A.; Tesler, A. B.; Pinkas, I.; Walensky, S.; Shimanovich, U. *ACS Materials Au* **2023**, DOI: 10.1021/acsmaterialsau.3c00023.

(23) Oklu, R.; Khademhosseini, A.; Weiss, P. S. *ACS Nano* **2015**, *9* (8), 7733–7734.