

Publikationen in Peer-Review Journals:

- A. Hariharan, P. Goldberg, T. Gustmann, E. Maawad, S. Pilz, F. Schell, T. Kunze, C. Zwahr, A. Gebert, Designing the microstructural constituents of an additively manufactured near β Ti alloy for an enhanced mechanical and corrosion response, **Materials & Design**. 217 (2022) 110618. <https://doi.org/10.1016/j.matdes.2022.110618>.
- F. Schell, S. Alamri, A. Hariharan, A. Gebert, A.F. Lasagni, T. Kunze, Fabrication of four-level hierarchical topographies through the combination of LIPSS and direct laser interference patterning on near-beta titanium alloy, **Materials Letters**. 306 (2022) 130920. <https://doi.org/10.1016/j.matlet.2021.130920>.
- F. Schell, A. Hariharan, P. Goldberg, R. Baumann, E. Jäger, A. Gebert, C. Zwahr, A.F. Lasagni, Pulse duration and wavelength effects on the surface topography of Direct Laser Interference Patterning treated titanium specimen, **Journal of Laser Micro/Nanoengineering**. 17 (2022) 199–206. <https://doi.org/10.2961/jlmn.2022.03.3002>.
- P. Goldberg, A. Hariharan, F. Schell, M. Hantusch, M.O. Cichocka, N. Pérez, A. Voß, L. Giebeler, V. Hoffmann, C. Zwahr, A.F. Lasagni, A. Gebert, Fine-tuning effect of Direct Laser Interference Patterning on the surface states and the corrosion behavior of a biomedical additively manufactured beta Ti alloy, **Corrosion Science**. 219 (2023) 111230. <https://doi.org/10.1016/j.corsci.2023.111230>.
- A. Hariharan, P. Goldberg, F. Schell, U. Hempel, F. Striggow, M. Hantusch, M. Medina-Sánchez, A.F. Lasagni, A. Gebert, Enhanced human osteoblast proliferation and differentiation on laser-micro and nano textured surfaces of additively manufactured Ti biomaterial alloy, **Advanced Functional Materials**. (2023, accepted).

Publikationen in Konferenzbänden:

- F. Schell, A. Hariharan, P. Goldberg, S. Alamri, A. Gebert, T. Kunze, A.F. Lasagni, From infrared to ultraviolet: direct laser interference patterning of additively manufactured titanium alloy using a picosecond laser, Laser-Based Micro- and Nanoprocessing XVI, SPIE, San Francisco, United States, 2022. <https://doi.org/10.1117/12.2610634>
- F. Schell, A. Hariharan, P. Goldberg, R. Baumann, E. Jäger, A. Gebert, C. Zwahr, A.F. Lasagni, Pulse duration and wavelength effects on the surface topography of Direct Laser Interference Patterning treated titanium specimen, Proceedings of LPM 2022, Dresden, Germany, 2022.
- F. Schell, A. Hariharan, P. Goldberg, U. Hempel, M. Hantusch, F. Striggow, M. Medina-Sánchez, C. Zwahr, A.F. Lasagni, A. Gebert, Laser-interference treatment improves osteogenic differentiation of human bone marrow stromal cells on additively manufactured near-beta titanium alloy, in: Proceedings of LPM2023, Hirosaki, Japan, 2023.
- F. Schell, P. Goldberg, A. Hariharan, M. Hantusch, O. Cichocka, N. Pérez, A. Voß, L. Giebeler, V. Hoffmann, C. Zwahr, A.F. Lasagni, A. Gebert, Laser interference-treatment tunes surface states and corrosion behavior of additively manufactured near-beta Ti alloy, Proceedings of LIM 2023, Munich, 2023.

Vorträge und Poster:

- Poster: F. Schell, S. Alamri, A. Hariharan, A. Gebert, A. F. Lasagni, T. Kunze, Multiscale microtexturing of additive-manufactured titanium alloy for increased osseointegration, MaterialsWeek 2021, September 2021, Dresden, Germany (online).
- Vortrag: F. Schell, A. Hariharan, P. Goldberg, S. Alamri, A. Gebert, T. Kunze, A. F. Lasagni, From infrared to ultraviolet: direct laser interference patterning of additively manufactured titanium alloy using a

picosecond laser, Laser-Based Micro- and Nanoprocessing XVI, SPIE, March 2022, San Francisco, United States (online).

- Poster: A. Hariharan, P. Goldberg, T. Gustmann, E. Maawaad, S. Pilz, {F. Schell, T. Kunze, C. Zwahr, A. Gebert, Additive Fertigung von near-beta Ti-13Nb-13Zr Komponenten mit erhöhter Biofunktionalität für Implantatanwendungen, 3. Fachtagung Werkstoffe und Additive Fertigung 2022, May 2022, Dresden, Germany (online).
- Vortrag: F. Schell, A. Hariharan, P. Goldberg, R. Baumann, E. Jäger, A. Gebert, C. Zwahr, A. F. Lasagni, Pulse duration and wavelength effects on the topography of direct laser interference patterning treated titanium specimen, 23rd International Symposium on Laser Precision Microfabrication (LPM 2022), June 2022, Dresden, Germany.
- Vortrag: A. Hariharan, P. Goldberg, T. Gustmann, E. Maawad, S. Pilz, F. Schell, C. Zwahr, A. Gebert, Tailoring the microstructural phases of an additively manufactured near- β Ti alloy for an enhanced mechanical and corrosion response, Materials Science and Engineering Congress (MSE 2022) Congress, September 2022, Darmstadt, Germany.
- Vortrag: F. Schell, A. Hariharan, P. Goldberg, U. Hempel, M. Hantusch, F. Striggow, M. Medina-Sánchez, C. Zwahr, A. F. Lasagni, A. Gebert, Laser-interference treatment improves osseointegration on additively manufactured near-beta titanium alloy, 24th International Symposium on Laser Precision Microfabrication (LPM 2023), June 2023, Hiroasaki, Japan.
- Vortrag: F. Schell, P. Goldberg, A. Hariharan, M. Hantusch, M. O. Cichocka, N. Pérez, A. Voß, L. Giebeler, V. Hoffmann, C. Zwahr, A. F. Lasagni, A. Gebert, Laser Interference-treatment tunes surface states and corrosion behavior of additively manufactured near-beta Ti alloy, Conference on Lasers in Manufacturing (LiM 2023), June 2023, Munich, Germany.
- Vortrag: A. Gebert, A. Hariharan, P. Goldberg, F. Schell, U. Hempel, S. Pilz, M. Hantusch, F. Striggow, Zwahr, A. F. Lasagni, Additive manufactured and laser surface treated near-beta Ti-13Nb-13Zr alloy for bone implant application, Material Science and Technology in Europe (FEMS Euromat 2023), September 2023, Frankfurt am Main, Germany.
- Poster: P. Goldberg, A. Hariharan, F. Schell, M. Hantusch, M. O. Cichocka, N. Pérez, A. Voß, L. Giebeler, V. Hoffmann, F. Striggow, S. Pilz, U. Hempel, C. Zwahr, A. F. Lasagni, A. Gebert, Additive manufacturing and laser-texturing of near-beta Ti-13Nb-13Zr alloy for tuning its microstructure and surface state to enhance biofunctionality, Material Science and Technology in Europe (FEMS Euromat 2023), September 2023, Frankfurt am Main, Germany.
- Vortrag (geplant): A. Gebert, A. Hariharan, P. Goldberg, F. Schell, U. Hempel, C. Zwahr, A. F. Lasagni: Additively manufactured and laser surface textured Ti-13Nb-13Zr for bone implant application, 12th World Biomaterials Congress (WBC 2024), May 2024, Daegu, Korea.

Sonstige Veröffentlichungen:

- F. Schell, C. Zwahr, P. Goldberg, A. Hariharan, A. Gebert: Creating a new generation of medical implants, Laser Systems Europe, 2022. <https://www.lasersystemseurope.com/analysis-opinion/creating-new-generation-medical-implants>