

Inhalt/ Content 33/3 (2024)

SPECIAL TOPIC

Material transitions in architecture and construction

This Special topic examines the interdisciplinary research and use of sustainable building materials, emphasizing future visions, implementation opportunities and obstacles, conditions of use and acceptability, and requirements for integration into planning phases in architecture and construction.

8

EDITORIAL

- 3 P. RIOUSSET

TA FOCUS

- 6 *Personalia • Meldungen • Aus dem openTA-Kalender • 5 Fragen an A. Bergmans*

SPECIAL TOPIC MATERIAL TRANSITIONS IN ARCHITECTURE AND CONSTRUCTION: SOCIAL IMPLICATIONS, APPROPRIATION, AND OUTCOMES FOR SUSTAINABILITY

- 9 C. KROPP, S. AICHER
Building the future: Toward a sustainable material transition in architecture and construction
- 15 L. FISCHER, S. LOSACKER
Competing or complementary?: Socio-technical imaginaries of a bio-based construction sector
- 22 S. DELVAUX, P. DELVENNE
Futurizing “good construction(s)”: ‘Low-carbon’ and ‘labor’ futures in the Belgian construction sector
- 28 J. WARDA, G. SCHILLER, B. DITZE, R. KNIPPSCHILD
Wer macht die Materialwende?: Zur Rolle von zirkulären und denkmalpflegerischen Ansätzen für die Transformation des Bauwesens
- 35 A. SEEBACHER, S. BÖHM, E. BOERMAN
Materials libraries as knowledge tools on the path toward a circular construction industry
- 42 S. RICHTER, G. HUSSELS, T. SIMON-MEYER
Lab-grown materials for architecture
- 48 P. ASA, K. KRAUTHAUSEN, R. STOCK, K. DIERICHS
Architectures of syntopia: An interdisciplinary speculative model for constructions with insect-infested wood

RESEARCH

Resource intensity of the digital transformation

What are the resource requirements and environmental impacts of digital products and services? Milde et al. analyze at micro- and macro-levels the potentials and obstacles to reducing the raw material and CO₂ intensity of the digital transformation in Germany.

57

INTERVIEW

Computational design for a new material culture?

Interviewees J. Knippers and A. Menges discuss computational design for transforming the construction industry. They emphasize lightweight and biomimetic approaches as well as context-specific, environmentally conscious decisions.

72

RESEARCH

57 K. MILDE, M. MEYER, R. KIRCHDORFER, D. HAACK
Resource intensity of the digital transformation in Germany

65 M. RUDDAT, L. ELTROP, B.-M. LORENZ, B. MACK, M. SONNBERGER, K. TAMPE-MAI
Klimaschutz in der Sackgasse: Zwischen klarer Zielsetzung und umstrittenen Lösungswegen

INTERVIEW

72 WITH/MIT JAN KNIPPERS AND ACHIM MENGES, VON/BY C. KROPP
Computational design for a new material culture?

REFLECTIONS

76 T. FRASKE
Book review: Smil, Vaclav (2023): Invention and innovation. A brief history of hype and failure

78 D. MAHR
Book review: Potochnik, Angela (2024): Science and the Public

80 M. W. SCHMIDT
Book review: Nyholm, Sven (2023): This is technology ethics. An introduction

82 M. ORNETZEDER, K. KASTENHOFER, S. FAVREUILLE
Meeting report: „Methoden für die Technikfolgenabschätzung – Im Spannungsfeld zwischen bewährter Praxis und neuen Möglichkeiten“. Conference, 2024, Wien, AT

84 G. ROHDE, J. BACKHAUS, S. JOHN, A. SONNTAG, J. DACHTERA, I. LEURS, M. RÖSSNER, S. BÖSCHEN, G. GRAMELSBERGER
Meeting report: “Knowledge transfer in and through Living Labs”. International Conference and Training School, 2024, Aachen (hybrid), DE

86 TATuP Dates