

Preparation of bio-functional textiles by surface functionalization of cellulose fabrics with caffeine loaded nanoparticles

Original

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AUTEX 2018

Leading Edge Technologies
and Trends in Textiles

18th World
Textile Conference

www.autex2018.org

BOOK OF FULL TEXT

20-22 June 2018

Swissotel The Bosphorus
İstanbul, Turkey



Dear Authors and Readers,

It is a great pleasure for me to write this foreword for Autex 2018, 18th World Textile Conference, held in Istanbul, Turkey between 20-22 June 2018. Autex Conference brings together academicians, researchers, industry professionals, experts in textile field from all over the world and makes a significant contribution to realization of Autex objectives. It is a great honour for Istanbul Technical University, Textile Technologies and Design Faculty, to host this organization, which is one of the most important events in the field of textiles.

The papers presented in the conference contributed to the knowledge and novelty in textile science in the sessions of Protective Textiles, Innovative Functional Textiles, Ecological and Environmental Textiles, Recycling and Life Cycle Analysis, Surface Functionalization and Coating, Smart, Interactive and Multifunctional Textiles, Technical Textiles, Composites and Membranes, Nanotechnology, Nanotextiles, Electrospinning, Textile and Clothing Machinery, Comfort Science, Modelling and Simulation, Fashion - Garment Industry and Marketing, Textile Testing, Measuring Technology, Fashion - Design and Garment Industry, Textile Economy, Textile Supply Chain Management, Advanced Fibers and Materials. Medical Textiles. Tissue Engineering, Implants, Textile Processing, Advanced Fibres and Materials, Modern Textile Education and Training, Innovation & Entrepreneurship, Fashion, Garment Industry, Simulation & Modeling. Seven plenary speakers made presentations in addition to the contributed papers.

I deeply hope the proceedings included in this book will contribute as a reference book for novel studies and research.

I, once more, would like to thank to the plenary speakers, all conference authors and participants for their most valuable contribution.

Our gratitude also goes to our sponsors of whom are the representatives of the huge Turkish Textile Industry for their generous support to this conference. We hope Autex 2018 conference will be one that you will mostly enjoy and remember and will take its place among your most memorable experience in the beautiful city of Istanbul.

Prof. Dr. Fatma Kalaoğlu
Conference Chair



AUTESX is the Association of Universities for Textiles, which brings together prestigious universities in the field of the textile industry from all over the world. It was founded in 1994, and currently has 39 active members from 28 countries. There are 2 types of memberships, full members and associate members.

AUTESX objectives are:

- To promote the activities and achievements of the member Universities on a European and Global stage.
- To facilitate co-operation in the development and delivery of high level taught courses and teaching materials amongst member Universities.
- To encourage student and staff mobility and networking amongst member Universities and invited partners.
- To facilitate the growth of active research partnerships amongst member Universities and invited partners.
- To organize annual symposia to disseminate cutting-edge issues to textile professionals and students.
- To facilitate co-operation amongst members in high level textile education and research

Every year a different member of the AUTESX is organizing the association's conference, starting from 2000. The AUTESX Conference is one of the most important scientific events in the field of textiles aimed to bring together leading researchers, experts, students and people from the industry from all over the world to share their knowledge and exchange scientific ideas.

The Organizing and Scientific Committees would like to highlight the importance of the AUTESX Conference as a textile platform offering the participants to present and discuss the most recent research investigations, new perspectives and future directions.

The 18th AUTESX Conference will be organized and held by the Istanbul Technical University–Faculty of Textile Technologies and Design in İstanbul, Turkey, during 20-22 of June 2018.



ITU: From Past to Future

Istanbul Technical University is one of the world's oldest technical universities with a long history of 250 years.

ITU is a reputable institution known for its history, science, technology, art and sport achievements over the period of 245 years. It is a research centre connecting the past to the present and designing projects for the future. ITU, that has presented numerous scientific and technological developments, was the first to introduce novelties and unique achievements, provides academic learning being one of the oldest and most prominent technical universities in the world.

ITU offers 39 graduate programs at 13 faculties, 39 postgraduate and doctoral programs at 6 institutes on five different campuses, all of them located in the heart of Istanbul.

ITU has 360 laboratories and 13 research centers. With 23 engineering programs accredited by ABET Accreditation, ITU is the world's leader among universities. Students participating in International Exchange Graduate Programs complete a part of their education at one of the partner universities in the USA and receive a dual diploma. ITU offers a number of double major programs and is the top university in Turkey providing a broad range of Erasmus exchange programs with more than 900 international agreements.

ITU is the cradle of science, industry and technology conducting over 200 R&D projects in the scope of ARI Teknokent. In cooperation with the entrepreneurship ecosystem ITU Seed, the university provides support to students-entrepreneurs.

Turkey's first communication satellite, first electric mini bus, first hydrogen-powered boat, first driverless car, first national computer were launched by ITU. The first television broadcast in Turkey was made from ITU, the first university radio station was opened in ITU.

Long history, intelligent minds and outstanding academic environment of ITU form a strong bridge connecting the past to the future. With the priority for continuous development, innovative perspective and strong international contacts ITU proves to be the university of the past, present and future.

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Conference Topics

Below is presented a brief list of the AUTEX 2018 conference topics:

1. Advanced Fibres and Materials
2. Innovative Functional Textiles
3. Technical Textiles, Composites and Membranes
4. Protective Textiles
5. Medical Textiles, Tissue Engineering, Implants
6. Smart, Interactive and Multifunctional Textiles
7. Textile Processing
8. Innovative Textile Structures
9. Nanotechnology, Nanotextiles, Electrospinning
10. Biopolymers and Biotechnology
11. Surface Functionalization and Coating
12. Textile and Clothing Machinery
13. Textile Testing, Measuring Technology
14. CAD/CAE-Technology, Mass Customisation
15. Modelling and Simulation
16. Fashion – Design and Garment Industry
17. Comfort Science
18. Conservation of Textiles
19. Ecological and Environmental Textiles, Recycling and Life Cycle Analysis
20. Textile Economy, Textile Supply Chain Management
21. Innovation and Entrepreneurship
22. Modern Textile Education and Training

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