

ACIMIT has also planned a road show in 2016, with the aim of promoting Italian textile technology in Iran's major textile producing areas.

Iran, Switzerland to develop academic coop

Iranian and Swiss universities are going to have exchange programs, said Iranian Deputy Science Minister for Research Vahid Ahmadi on the sidelines of the meeting between research presidents of Iranian universities and a Swiss academic delegation in Tehran on Saturday.

The official referred to Swiss Federal Institute of Technology Lausanne AKA École Polytechnique Fédérale de Lausanne (EPFL University) as one of the two prestigious Swiss federal institutes of technology and a prominent academic center in the world with 170 students studying in it at the moment.

Ahmadi added that EPFL University has voiced eagerness to exchange students and Professors in many fields with Iranian universities. He highlighted archaeology, environment, and human sciences as major areas of interest for the Swiss to enjoy the expertise of Iranians. The official recounted that agreements have been made to have joint programs of students exchange, professors exchange, academic studies grace, conferences, and seminars in near future.

Researchers synthesize nanoparticles using pomegranate peel

Pointing to the importance of using environment-friendly materials in chemical processing, the director of the project Majid Nasiri Boroumand said that, "silver nanoparticles have great significance in science and industry and several methods have been developed to synthesize them."

"Applying chemical methods to produce nanoparticles is problematic due to the presence of toxic chemical elements and the efforts to synthesize nanoparticles using natural combinations are dubbed as 'green synthesis methods,'" he added. Nasiri reiterated that, "implementing green methods for synthesis of nanoparticles can be a good alternative to conventional chemical approaches due to lower production of toxic and dangerous materials which are harmful to humans." Stressing that natural materials have been incorporated in recent research studies, he noted that, "we decided to use natural dyes commonly used in carpet weaving industry because of their regenerative power."

Stating that the natural dyes extracted from 'Mignonette'

plant and 'pomegranate peels' were used in the project, the researcher said asserted that, "the results showed that the natural dyes used to synthesized silver nanoparticles could also bring more stability to the particles."

Pointing to the uses of the nanoparticles produced by this method, he underlined that, "the resulting nanoparticles enjoy antibacterial properties and can be used in medical fields as well as antimicrobial textiles."

Nasiri deemed production of dyed wool used in carpet weaving industry as another function of the new method concluding that, "the dyed fibers produced using this method will have antibacterial properties."

Scientists use graphene quantum dots to produce azo dyes

TEHRAN, Sep. 21 (MNA) – Iranian researchers succeeded in the laboratorial production of quantum dots made of graphene as catalysts to produce azo dyes to be used in color and textile industries, INIC reports.

Azo dyes are widely used in color and textile industries due to their high mechanical and thermal stability and they are applied in pharmaceuticals as drug carriers.

According to Iran Nanotechnology Initiative Council (INIC), the Iranian researchers succeeded in the laboratorial production of quantum dots made of graphene as catalysts to produce azo dyes. The produced nanocatalyst showed appropriate performance in increasing the efficiency of the production of azo dye compounds.

Modified graphene quantum dots have been used in this research as nanocatalyst to synthesize azo dyes. According to the results, the use of the nanostructure optimizes the production method to produce azo compounds. In fact, much higher efficiency has been obtained in the production of the product in shorter time by spending the minimum of cost.

The first step in the synthesis of azo dyes is the conversion of amine compounds into diazonium salts. Graphene quantum dots produced in this research are used as the source of nitozonium to be used in this step. Therefore, the process of the production of azo dyes does not require sodium nitrite any more, which is a very toxic compound. In summary, the synthesis and evaluation of the nanostructures have been designed on the basis of green chemistry, and all processes have been carried out based on spending less time to obtain high-efficient products without harming the environment.

Results of the research have been published in *Dyes and Pigments*, vol. 113, 2015, pp. 522-528.

Iran Textile News

8th Intl. Iran Nano 2015 Festival

The 8th International Iran Nano 2015 Festival began on Mon. at Tehran International Permanent Fairground with the participation of 160 Iranian and international companies, universities and research centers.

Active institutes are participating in the 8th International Nanotechnology Festival in forms of promotional organizations, including Nano Students Club, specialized bookshop, academic associations and educational companies, scientific centers, parks and incubators, while industrial companies are present in the seven categories of equipment manufacturers, water and environment, health and hygiene, building and paint, nanomaterials, textile, industries and polymer.

Consultative and service providing companies as well as technology service providers and international companies are attending the festival which will continue until 8 October 2015.

A stall is allocated to innovative projects in the festival just like the previous three years. The jury has selected 31 top projects, and the stall presents prototypes that are beyond laboratorial level and have succeeded in the acquirement of Nano Scale certificate to attract investors.

There are specific programs to invite ambassadors of various countries and representatives of companies to visit the exhibition. According to the Secretary General of Iran Nanotechnology Initiative Council, the meetings and visits of ambassadors will be a beginning to initiate cooperation in the field of research and technology transfer from Iran to other countries, and the investment of the foreign capital holders in

the Iranian market.

The opening ceremony of Iran Nano 2015 festival was attended by Iran's VP for Science and Technology Affairs Sorena Sattari, head of Atomic Energy Organization of Iran Ali Akbar Salehi, first deputy speaker of the Parliament Mohammad-Hassan Aboutorabi Fard and the Secretary General of Iran Nanotechnology Initiative Council Dr. Saeid Sarkar.

Italian textile machinery delegation to visit Iran

To consolidate its presence in the Iranian textile industry, Italian textile machinery association – ACIMIT is participating in an Italian trade mission to Iran in late November.

This follows from the agreement reached in July on nuclear talks between P5+1 countries and Iran which lifted the sanctions, thereby opening the door to a resumption in investments in textile technology by Iran.

“To seize these new opportunities, ACIMIT, will participate in the Italian trade mission promoted by the Italian Ministry of Economic Development and Ministry of Foreign Affairs, and organised by the Italian Trade Agency. “In 2014, flow of exports of textile machinery to Iran resumed, but not with the same intensity as prior to application of international sanctions,” Raffaella Carabelli, president of ACIMIT said.

“In 2004, Iran was actually the fourth largest market for Italian exports from the textile sector and after years of complete stagnation, in 2014 exports to Iran returned to growth figures,” Carabelli noted.

“Now's the time to return to invest our energies on the Iranian market and recover lost time, starting with the business mission in late November,” she observed.



Cematex, The European Committee of Textile Machinery Manufacturers

ITMA returns to Barcelona in 2019

16 September 2015 – CEMATEX announces that Spain will host the 18th edition of ITMA, the world's largest exhibition of textile and garment machinery technology. It will be held at the Fira de Barcelona exhibition centre from 20 to 26 June 2019.

Fira de Barcelona won the international bid organised by CEMATEX, the owner of the ITMA and ITMA ASIA shows, after fierce competition from three other short-listed bidders out of an original list of 9 venues.

ITMA was last held in Barcelona in 2011 where visitorship exceeded 100,000 from 138 countries. 90% of the visitors came from outside of Spain, and the international mix of visitors and buyers was very well received by exhibitors.

Mr Charles Beauduin, President of CEMATEX, stated "We are delighted to bring ITMA back to Barcelona. The selection process took us 2 years and our investigations into all the 9 potential venues and their services were very detailed. We enjoyed an extremely successful show in Barcelona in 2011 and our exhibitors and visitors were very impressed with the facilities and infrastructure on site. We are looking forward to another great event there in 2019".

Mr Agustín Cordon, CEO of Fira de Barcelona, added "We are delighted and honoured to have been selected once more to host the ITMA show, and our team is looking forward to welcoming exhibitors and visitors back to the city. We gained a lot of experience from working on the 2011 show and are confident of achieving another very successful event".

CEMATEX has appointed an official accommodation agency, B-network, to manage the hotel accommodation services for ITMA 2019, following on from its very professional and successful management of accommodation for the 2011 show. An official website has already been set up (www.itmahotels.b-network.com) offering very competitive rates in a wide range of hotels.

Preparations for this year's ITMA in Milan (12 to 19 November) are continuing, with over 1,600 exhibitors from more than 40 countries taking part. Expectations are that a trade visitorship of over 100,000 from more than 140 countries will participate.

Further details are available at www.itma.com

About CEMATEX & ITMA

The European Committee of Textile Machinery Manufacturers (CEMATEX) comprises national textile machinery associations from Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland and the United Kingdom. It is the owner of ITMA and ITMA ASIA. Considered the 'Olympics' of textile machinery exhibitions, ITMA has a 64-year history of displaying the latest in machinery and software for every single work process of textile making. It is held every four years in Europe.

DOMOTEX Turkey (23–26 May 2016)

DOMOTEX Turkey: Leading business platform for carpet-makers from Turkey and the Middle East

Gaziantep, Turkey. The gates will be open on DOMOTEX Turkey 2016 from 23 to 26 May in Gaziantep. As the leading sales platform for carpet manufacturers in Turkey and the Middle East, the trade fair will again bring together all the major brands under one roof. The event is organized by the Deutsche Messe subsidiary Hannover Fairs Turkey in cooperation with the Gaziantep Chamber of Commerce (GTO), the Association of South Anatolian Carpet Exporters (GAIB) and the Gaziantep Chamber of Carpet Manufacturers (GHO).

This year, the trade fair DOMOTEX Turkey was able to convincingly reaffirm its reputation as the leading hub for manufacturers of machine-made carpets in Turkey and the Middle East. A total of 198 companies exhibited their products in a display covering a total of 22,025 square meters. The large number of participants from outside the host country was particularly impressive: 33 of the 198 exhibitors came from Bangladesh, Belgium, China, Germany, France, India, Iran, Jordan, Saudi Arabia, Sri Lanka and Uzbekistan. All exhibitors were eager to access new markets and impress the 8,734 trade visitors from the target markets of Turkey and the Middle East with their original designs and novel collections.

Well-known manufacturers in the carpet and floor covering industries such as Angora, Atlas Hali, Bahariye Mensucat, Gheytehan, Kaplan Kardesler, Kartal Hali, Kaşmir, M.A. Trading, McThree, Merinos, Royal, Saray Hali, Superba and Yasin Kaplan showcased a broad range of new products at this foreign offshoot of the DOMOTEX trade fair annually held in Hannover, Germany. The display featured machine-made carpets and an interesting selection of hand-knotted products, textile and resilient floor coverings, parquet and laminate flooring, as well as diverse processing machines, plus accessories and auxiliary equipment. For the visiting public one of the chief attractions was the vast number of designs that reflect current consumer trends and anticipate new trends. The trade visitors took advantage of the opportunity to view thousands of contemporary and traditional carpet designs worked in different materials, such as wool, silk, cashmere, bamboo fibers and polyester.



Super-DLSC 200: New Crosslapper, Speed 200 m/min.

The new crosslapper type "Super-DLSC 200" allows electro-mechanical speeds of up to 200 m/min for web infeed speeds, depending on the fibre specification. It aims at reducing a possible bottleneck for the total throughput of the complete installation. At the crosslapper infeed Dilo has installed the proven "CV1A" web regulation system for an improved evenness of the needlefelt with a great potential for fibre savings. This very high web infeed speed has been made possible by a further increase of the drive power within the "3-apron-layering technology". All drives for the aprons and the layering carriages are direct water-cooled torque motors to improve the acceleration with reduced gear wear. In addition, we have taken special measures to eliminate and reduce apron vibrations in order to achieve an exact web overlapping (lap joints). Furthermore, we have installed a "web guiding system" (FLS) to avoid wrinkles for example at the speed change of the upper carriage. The web infeed width is 3.2 m, the layering width is 7.0 m

DI-LOOM AB: Pre-Needleloom with improved efficiency

After the crosslapper, Dilo will show a new needleloom type DI-LOOM OD-II AB with CBF feeding system. When designing this model series, Dilo has laid special emphasis on cost effectiveness in the preneedling machine. The model series DI-LOOM AB has a very favourable price-performance ratio.

"DCL Dilo-Compact Line": Compact production line, working width 2,2 m

In addition to wide needling lines for the economic production of large volume products as in the geotextile industry, Dilo will show a compact line which is designed for the production of small amounts of high quality felts used in the medical sector and for specialty felts made from fibres such as carbon. The working width of the compact carding machine is 1.1 m, the layering width is 2.2 m.

"X22": Dilo needle module technology

The needleloom of the compact line is the first to use needle modules. The needle module technology has been designed especially for the intense needling of the model series Hyperpunch and Cyclopunch in order to allow an economic needle insertion of these boards with more than 20.000 needles/m/board. The compact needle loom shows the module technology in a classical fishbone arrangement, each module comprising 22 needles. A graphic simulation shows the automatic insertion of the needle boards in the "Modulmaster" using needle modules. Development work will be finished during the coming months. These new approaches illustrate the economic effectiveness of module technology. Furthermore, the insertion speed and precision are considerably increased by "X22 module technology" compared to single needle insertion.

"VPX 2020": "Dilo-Variopunch" – New needling technology

The new "Variopunch technology" is based on a modified needle module technology which can erase bad spots in the felt by a variable needle arrangement in order to achieve a better evenness of the stitching pattern. The basics of the completely new needling technology VPX200 will be presented with the aid of graphic simulations. Variopunch allows a very homogeneous distribution of stitches for better surface quality in automotive applications. Dilo will show numerous needlefelt samples for many different applications in hall H3 at booth No. C104. Members of the Dilo sales department with around 50 people present will be ready to receive customers and interested parties. The DiloGroup looks forward to this major international exhibition and especially to meeting customers from all over the world.

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has been further reduced, Dilo will show a staple fibre needling line for the production of technical textiles in wide working width which is especially suitable to produce for example geotextiles. Fibre preparation from DiloTemafa starts with a bale opener BTDL of the latest design which is suitable for processing longer fibres. The subsequent carding willow KW combines in the preopening stage good preblending and preopening with highest throughput. It is also designed for processing longer fibres. New design elements allow longer cleaning intervals with reduced cleaning time. The subsequent dosing opener DON feeds the fibres via its fine opening stage to the newly developed card feeder type VRS-P.

“UniFeed”: New Card Feeder VRS-P

The VRS-P feeder combines the principle of volumetric precisely charged feeding, with the characteristics of a vibration chute feeder and eliminates a conventional large trunk (on the top). This results in a better and more homogeneous distribution of the fibre flocks. Furthermore, a lower ceiling height of the building reduces the costs for the construction of the factory and its operating expenses.

The fibre flock matt is condensed by a vacuum delivery apron for a better uniformity of the fibre mass distribution. Additional flaps control the fibre distribution over the working width.

Card feeders of the VRS series are especially adapted for medium-fine to coarse, and medium to long staple fibres.

New card series “VectorQuadroCard” with variable “intermediate transfer”

The newly developed card “VectorQuadroCard” incorporates a completely new “modular transfer group” between breast and main section. The flexible and quick change of this “transfer group” makes possible three different card types:

- type VQ-Q with a “Quattro group” to improve web evenness and fibre blending, arranged as a double transfer between preopener and main cylinder with two doffers and two transfer rollers to the main cylinder.
- type VQ-V with a top doffer together with a transfer roller and a lower transfer roller to increase the throughput by using the “doubling effect” between preopener and main cylinder.
- type VQ-T with only one transfer roller between preopener and main cylinder.

The model series VQC uses 4 worker/stripper pairs of rollers on the preopener and five worker/stripper pairs on the main cylinder. Furthermore, the delivery system is also very flexible and may be combined in different variations:

- With two doffer rollers and respective parallel delivery system
- With pairs of doffer rollers and condenser rolls top and bottom
- as random card with random rollers, doffers, condenser rolls and take-off rollers

The universal model series “VectorQuadroCard” comprises variable components for all kinds of applications. Focus is laid on high throughput with good web quality. The “VQC” exhibited at the show with a working width of 3.2 m is designed for the geotextile sector.



Dilo booth in Milan

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DILO GROUP

ENGINEERING FOR NONWOVENS

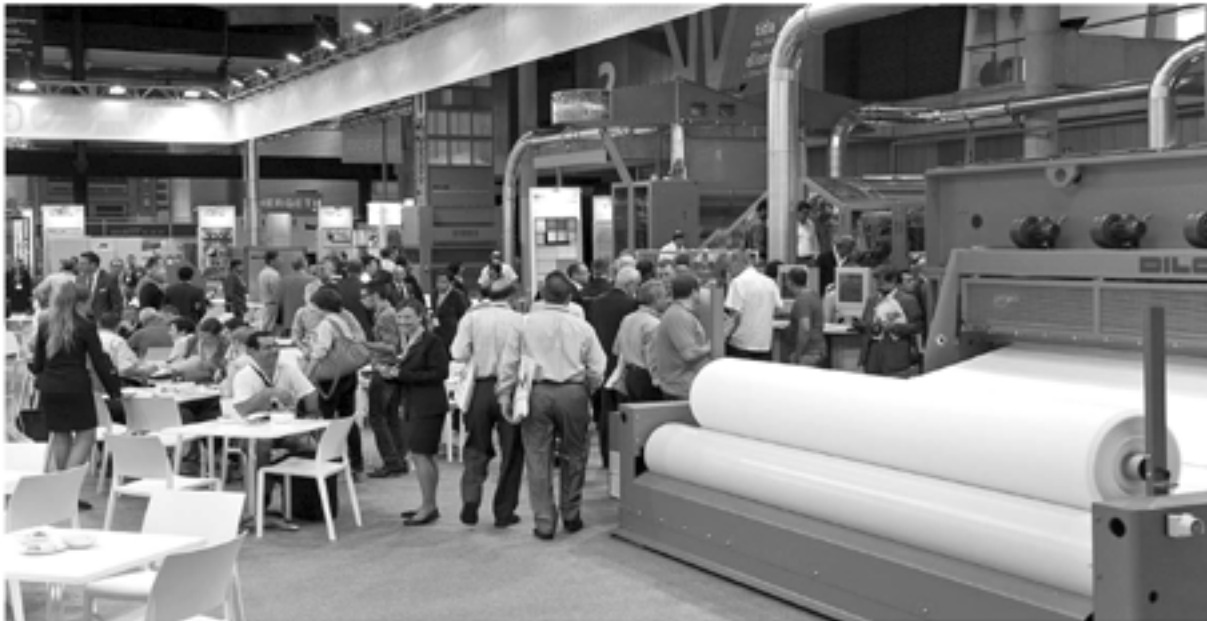
PRESS RELEASE

September 2015
Di-ad/aw

DiloGroup: High Order Intake – Impetus for the forthcoming ITMA Hall H3, booth No. C104

During the year there has been a great demand for Dilo lines for the production of needlefelts. An above-average order intake from the important markets has been registered.

For decades, the ITMA show has been the most important forum for DiloGroup to present its machines and production lines. As the leading company in the field of complete staple fibre nonwoven production lines, Dilo traditionally exhibits complete lines to show the latest developments in all components. This includes fibre preparation (opening and blending) from DiloTemafa, card and card feeding from DiloSpinnbau, followed by crosslapper and needlelooms from DiloMachines.



Dilo booth – ITMA Barcelona 2011

Dilo-Line: Large production line with a working width of 7 m

In Milan DiloGroup will exhibit two complete lines to show the broad scope of its portfolio on a total booth area of 1.232 m². Although the time for booth erection and machine installation

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