

# Transformed industrial sector opens up more trade avenues abroad

Fostering advanced manufacturing in Shanxi leads to province selling cutting-edge power equipment to Laos, delivered via new railway line



By YUAN SHENGGAO

A cargo train loaded with 50 sets of advanced power generators produced in Shanxi province left the city of Houma for the Southeast Asian country of Laos on March 15. The train, traveling through Xi'an in Shaanxi province and the Mohan Land Port in Yunnan province, arrived in Vientiane, capital of Laos, via the newly built China-Laos Railway. It was the first time that Shanxi-made advanced equipment had been delivered to Southeast Asia via the railway, a milestone in the province's opening-up. Shanxi, which has positioned itself as a new hub for opening-up in inland China, has developed the China-Europe freight train service since 2017. The Zhongding Logistics Park in the city of Jinzhong is the starting point of this major trade route. A bonded land port logistics park became operational recently in Houma. It is designed as a hub



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**Shen Fangtao**, an executive of Lu'an Solar Power Technologies

for foreign trade business with Southeast Asia. Lu Yong, general manager of the Taiyuan Bureau of China Railway Group, the operator of the freight train service, said his company will move more cargo to Southeast Asian countries including Laos, Thailand, Cambodia and Vietnam on the new railway line in the near future. By shipping locally made advanced equipment overseas, local officials said the freight train service showcases Shanxi's achievements in industrial transformation. Shanxi has transformed its industrial sector in recent years

with an initiative that fosters emerging sectors like advanced manufacturing and upgrades traditional sectors like coal mining. One example of Shanxi's advanced manufacturing is Lu'an Solar Power Technologies based in the city of Changzhi. The company uses the latest technologies, including robots, to produce a new generation of photovoltaic cells. Shen Fangtao, an executive of the company, said Lu'an now ranks fifth globally in the sales volume of photovoltaic cells. This is echoed by a recent report released by China's authoritative solar power research and consultancy institution, PV InfoLink. "To meet the strong demand from clients in more than 30 countries and regions, all the six production lines of our company are now running at full capacity," Shen said. "Our current output is about 720,000 cells a day." The executive said Lu'an is installing another two production lines to meet increasing demand. In addition, the company has focused on the research and development of high-efficiency photovoltaic cells. "A recent breakthrough is that we have developed a large-sized cell, which can improve power generation



A train loaded with 50 sets of advanced power generators produced in Shanxi province leaves the city of Houma for the Southeast Asian country of Laos on March 15. GUO YANJIE / FOR CHINA DAILY

capacity by 10 percent," Shen said. He explained such an improvement is the result of the use of aluminum oxide purification technology to avoid electricity loss caused by higher-resistance components. Shanxi is a province rich in bauxite, a mineral used for producing aluminum oxide and other aluminum products. Local enterprises are now focusing on developing higher value-added products from aluminum oxide, especially those used in the electronics, semiconductor and energy industries. Huajing Hengji New Materials based in the city of Xinzhou is now using the rich local bauxite resources to produce patterned sapphire substrate. Patterned sapphire substrate, or PSS, is a kind of artificial sapphire made from aluminum oxide. "The artificial sapphire is not used for jewelry," said Kuang Guangning, general manager of

the company. "PSS is widely used in the semiconductor, LED display and lighting industries for its high degree of transparency." The company's major products include a 4-inch round PSS chip inscribed with 850 million pyramid-shaped patterns designed for LED displays, according to Kuang. He added that Huajing Hengji is one of only a few Chinese providers of PSS chips with a diameter of less than 6 in. "The 4-in chip can be further divided into small pieces and used in more than 87,000 types of LED display devices," Kuang said. The company was founded in 2019 and began mass production in September 2020. Its sales revenue surpassed 200 million yuan (\$31.53 million) in the first year of operation, according to Kuang. He added that its 2021 sales revenue doubled the figure of 2020. While Lu'an and Huajing Hengji

represent the rapid development of cutting-edge emerging sectors, coal-mining and energy giant Jin-neng Holding Group is an example of how traditional industries are being upgraded with technology. The group's Tashan Coal Mine is among the pioneering smart coal mines in Shanxi, using digital and 5G-connected technologies. The coal mine is constantly upgrading its equipment and technologies to digitalize its operations, according to its executive Li Hua. These upgrades include the use of robots for coal mine shaft patrols and inspection, fully automated coal cutting and conveyance, and 5G-connected monitoring, according to Li. Niu Fulong, an executive of Jin-neng Holding, said the group will have another six coal mines "going smart" this year. Guo Yanjie contributed to this story.

## Local culture enchants international students

By YUAN SHENGGAO

When Choi Eun-soo, a student from South Korea, was taking part in an exchange event in China's Shanxi province, she said it felt like a dream coming true. Choi is learning Chinese language and culture at Jeonju University in the city of Jeonju in South Korea. When she heard about the opportunity to participate in the Chinese Bridge student exchange event months ago, she signed up and was soon admitted. This year's Chinese Bridge event is sponsored by the Center for Language Education and Cooperation of the Chinese Ministry of Education and organized by Taiyuan Normal University based in the Shanxi provincial capital of Taiyuan. "As a student studying Chinese, I know it is a rare opportunity to be able to use the language in China itself," Choi said. "I was told that Shanxi is one of the cradles of Chinese civilization, so I was eager to take part in the trip months ago." The event opened on March 23 in

Taiyuan. It gathered more than 180 students from 12 countries including South Korea, Vietnam, Mexico, Columbia and Cameroon. During the event, the students toured various places in Shanxi over a week. They had an all-around experience of Shanxi's culture by visiting places of historical interest, hearing local songs, watching folk dances and operas and tasting local dishes. In an online class, Zhao Lin, head of the department of dance at Taiyuan Normal University, showed various forms of local dance to the international students through video presentations. "Folk dances in Shanxi have their distinct local characteristics," Zhao said. "But they share the 'universal language' with any form of dance from around the world." Some students showed interest in the host university and said they hope to study at the school. Their interest was aroused when hearing lectures given by international students who had graduated from the university.



Students at Taiyuan Normal University perform a folk dance during the opening ceremony of the Chinese Bridge exchange event. LIU CAIWEN / FOR CHINA DAILY

A Taiyuan Normal University graduate from Afghanistan, who gave himself the Chinese name of Ma Yun, shared his experience of studying in the school. He recalled that when he just arrived in Shanxi for the first time in 2020, it was during the critical period of the COVID-19 outbreak. "When I felt nervous about it, we were visited by a number of teachers and school officials, who informed us about the pandemic prevention precautions and sent us gifts," he said. He also said that the secret in learning Chinese language is to integrate

with local life and local people. Guo Li, head of the international cooperation and exchanges department at Taiyuan Normal University, said the school began to enroll international students in 2019. It mainly offers Chinese language training to international students. The official said its first batch of foreign students all passed the HSK-4 Chinese language examination and 77 percent of the graduates were enrolled by famed Chinese universities for further studies. Wang Pei contributed to this story.

## Joint economic zone attracts \$84b in investment

By YUAN SHENGGAO

Less than a year after the Taiyuan-Xinzhou integration plan was announced, investors have flocked to the two cities for new development opportunities. Those coming recently include Beijing-based Huaxia Green Energy that agreed to launch an energy equipment project in Xinzhou; Shanxi-based Huayang Group that pledged to launch projects for producing degradable plastics, aerogel and other new materials in Taiyuan; and Jiangsu-based Jolywood Solar Material Technology that announced it is to build a high-purity polycrystalline silicon project in Taiyuan. The urban integration program of the two cities was proposed last year. In March 2021, the State Council released a guideline for the 14th Five-Year Plan (2021-25), requiring Shanxi to foster a city cluster in its central region. Grasping the historic opportunity, the Shanxi Committee of the Communist Party of China and the Shanxi provincial government made a plan to promote the development



Local officials and business representatives witness the launch of a number of investment projects in the Taiyuan-Xinzhou Integrated Economic Zone. LIANG CHEN / FOR CHINA DAILY

of the Taiyuan-Xinzhou Integrated Economic Zone in the month that followed. According to the plan, the integrated zone will comprise a number of economic zones and industrial parks in the two cities. The Taiyuan-Xinzhou integrated zone is also designed to host industries relocating from the Beijing-Tianjin-Hebei region, where an integrated regional development plan is in place. The integrated economic zone in

Shanxi will mobilize resources in both cities to build industrial clusters focusing on new materials and advanced equipment manufacturing, and foster new engines for the province's economic development, according to the plan. The plan also defined the industrial development of the two cities. Taiyuan is to focus on such sectors as the headquarters economy, high-end commerce, finance and advanced manufacturing; Xinzhou will highlight industries including eco-friend-

ly cultural tourism, modern agriculture, semiconductors and new materials. The Promotional Center for the Development of the Taiyuan-Xinzhou Integrated Economic Zone was founded on Dec 29, marking when the operation of the zone began officially. The zone's two operational centers in Taiyuan and Xinzhou were established on Dec 29 and 30 respectively. Soon after this, officials from the two cities arranged trips to Beijing and Tianjin municipalities and Hebei province for investment promotion. They have also traveled to other parts of the country to attract investors. Based on their efforts, the officials predicted that more than 480 projects will be launched in the Taiyuan-Xinzhou Integrated Economic Zone, with investment totaling 533.7 billion yuan (\$84.13 billion). The two cities continued to hold business promotional events this year, with the latest being a farm produce exhibition in Xiong'an New Area in Hebei province. Li Shu contributed to this story.

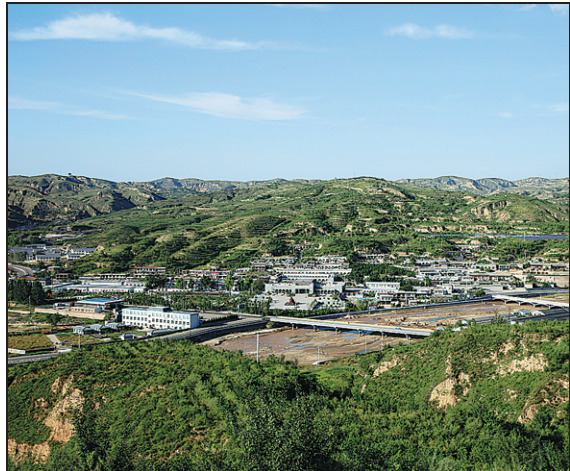
## Red tourism drives growth of township

By YUAN SHENGGAO

In the warming spring days of March when hundreds of wild flowers bloom, the township of Caijiaya in Xingxian county in the west of Shanxi province welcomed hundreds of visitors daily. The increasing number of tourists over the past few years is the result of a new railway line and a station in 2018. Four trains are now running on a daily basis between Caijiaya and the provincial capital of Taiyuan. But the railway alone cannot make the township a hot tourist destination. By the Weifen River, a branch of the Yellow River, and at the heart of the Lyuliang Mountains, Caijiaya looks like an ordinary village in the region. However, more than 80 years ago, it was part of the Jinsui Revolutionary Base, home to the headquarters of the 120th division of the Eighth Route Army led by famed Chinese general He Long (1896-1969). The army was stationed there to protect Yan'an in Shaanxi province, the cradle of the Chinese Communist revolution during the War of Resistance Against Japanese Aggression (1931-45) and the War of Liberation (1946-49). Today, the Jinsui Revolutionary Memorial Hall in Caijiaya remains a silent witness to the past. Red tourism, which focuses



4 million visits to Caijiaya since the railway line and station became operational in 2018 on exploring the history of the Communist Party of China before the founding of the People's Republic of China in 1949, has grown tremendously during the past few years. With tourists flocking to this Red tourism destination, local residents have had opportunities to improve their livelihoods with new sources of revenue. Over the past four years, the township has welcomed more than 4 million people. In addition to tourism, Caijiaya has developed other industries to grow revenue for residents, according to the township government. One such sector is the farming of cash crops. To date, Caijiaya has 1,200 hectares of land for growing organic coarse cereals, 4,300 hectares for walnuts, 105 hectares for medical herbs and 33 hectares for pears. The township also operates several solar farms, which means an additional annual income of more than 1,000 yuan (\$157) to every household on average. Han Linfang contributed to this story.



The township of Caijiaya is a famed Red tourism destination in Shanxi province. ZHU YAPING / FOR CHINA DAILY