**Băng tải : giảm bớt sức lao động**

Băng tải (hay băng chuyền) là một hệ thống máy dùng di chuyển hàng hóa, vật tư từ điểm này đến điểm khác theo một đường dẫn hướng xác định.

Băng tải đã được ứng dụng để vận chuyển than đá, quặng kim loại… trong thế kỷ 19. Dần dần những ưu điểm của nó đã được chú ý nhiều hơn, người ta cải tiến băng tải để phù hợp với nhiều ngành công nghiệp khác. Ngày nay, băng tải được sử dụng trong hầu hết các ngành công nghiệp, phù hợp với nhiều loại sản phẩm và nhiều cơ sở sản xuất từ quy mô vừa và nhỏ đến những doanh nghiệp quy mô sản xuất lớn.

Để hiểu rõ hơn Cục Thông tin KH&CN quốc gia xin giới thiệu một số bài nghiên cứu đã được xuất bản chính thức và các bài viết được chấp nhận đăng trên những cơ sở dữ liệu học thuật chính thống.



**1. Sciencedirect**

1. Investigation of numerical belt sag and conveyor capacities in inclined belt conveyors: An iterative approach  
Powder Technology 5 March 2023 Volume 420 (Cover date: 15 April 2023) 118394  
Berna Bolat, Birgül Aşçıoğlu Temiztaş, Alparslan Solak  
[https://www.sciencedirect.com/science//pii/S003259102300178X/pdfft?md5=d1856faf3982c1ab82aff5eb007050c9&pid=1-s2.0-S003259102300178X-main.pdf](https://www.sciencedirect.com/science/pii/S003259102300178X/pdfft?md5=d1856faf3982c1ab82aff5eb007050c9&pid=1-s2.0-S003259102300178X-main.pdf)  
  
2. Design, modeling, analysis and fabrication of swiveling conveyor  
Materials Today: Proceedings 5 October 2022 Volume 72, Part 3 (Cover date: 2023) Pages 1720-1724  
Surisetty Venkataiah, Irukulla Abinav, Koyyada Akhil  
[https://www.sciencedirect.com/science//pii/S221478532206299X/pdfft?md5=544bf1c00b946e473707fe118e744680&pid=1-s2.0-S221478532206299X-main.pdf](https://www.sciencedirect.com/science/pii/S221478532206299X/pdfft?md5=544bf1c00b946e473707fe118e744680&pid=1-s2.0-S221478532206299X-main.pdf)

3. The detection of forces acting on conveyor rollers of a laboratory device simulating the vertical section of a Sandwich Belt Conveyor  
Measurement 19 December 2022 Volume 207 (Cover date: 15 February 2023) 112376  
Leopold Hrabovský, Jan Blata, Jiří Fries  
[https://www.sciencedirect.com/science//pii/S026322412201572X/pdfft?md5=1ba6906727e9c38141d2e1ff06c9099a&pid=1-s2.0-S026322412201572X-main.pdf](https://www.sciencedirect.com/science/pii/S026322412201572X/pdfft?md5=1ba6906727e9c38141d2e1ff06c9099a&pid=1-s2.0-S026322412201572X-main.pdf)

4. A new paradigm for intelligent status detection of belt conveyors based on deep learning  
Measurement 20 March 2023 Volume 213 (Cover date: 31 May 2023) 112735  
Mengchao Zhang, Kai Jiang, Yuan Zhang  
[https://www.sciencedirect.com/science//pii/S0263224123002993/pdfft?md5=ac47a9663fc7d3dd1857d65570b3e543&pid=1-s2.0-S0263224123002993-main.pdf](https://www.sciencedirect.com/science/pii/S0263224123002993/pdfft?md5=ac47a9663fc7d3dd1857d65570b3e543&pid=1-s2.0-S0263224123002993-main.pdf)

5. Numerical study on the muck flow behavior in the screw conveyor during EPB shield tunneling  
Tunnelling and Underground Space Technology 27 January 2023 Volume 134 (Cover date: April 2023) 105017  
Dalong Jin, Yidong Guo, Yingran Fang  
[https://www.sciencedirect.com/science//pii/S0886779823000378/pdfft?md5=5232b869361d5020f10000e7859c2ca8&pid=1-s2.0-S0886779823000378-main.pdf](https://www.sciencedirect.com/science/pii/S0886779823000378/pdfft?md5=5232b869361d5020f10000e7859c2ca8&pid=1-s2.0-S0886779823000378-main.pdf)

6. Design and development of self-aligning troughing idler used in belt conveyor system  
Materials Today: Proceedings 20 September 2022 Volume 72, Part 3 (Cover date: 2023) Pages 1068-1072  
Mayuresh J. Deo, Deepak P. Hujare  
[https://www.sciencedirect.com/science//pii/S2214785322059788/pdfft?md5=11d6e163f224af9af020ccfc6fc3e5b6&pid=1-s2.0-S2214785322059788-main.pdf](https://www.sciencedirect.com/science/pii/S2214785322059788/pdfft?md5=11d6e163f224af9af020ccfc6fc3e5b6&pid=1-s2.0-S2214785322059788-main.pdf)

7. Predictive maintenance of baggage handling conveyors using IoT  
Computers & Industrial Engineering 24 January 2023 Volume 177 (Cover date: March 2023) 109033  
Vishal Gupta, Rony Mitra, Manoj Kumar Tiwari  
[https://www.sciencedirect.com/science//pii/S0360835223000578/pdfft?md5=5a71b9a02a2096a2b6727196fdc72618&pid=1-s2.0-S0360835223000578-main.pdf](https://www.sciencedirect.com/science/pii/S0360835223000578/pdfft?md5=5a71b9a02a2096a2b6727196fdc72618&pid=1-s2.0-S0360835223000578-main.pdf)

8. Low-order dynamical model and distributed coordinated model predictive control for multi-stage belt conveyor systems  
Journal of Process Control 26 February 2023 Volume 124 (Cover date: April 2023) Pages 83-91  
Chunyu Yang, Bin Chen, Lei Ma  
[https://www.sciencedirect.com/science//pii/S0959152423000367/pdfft?md5=c8fa98e5a714710815e20753215b3563&pid=1-s2.0-S0959152423000367-main.pdf](https://www.sciencedirect.com/science/pii/S0959152423000367/pdfft?md5=c8fa98e5a714710815e20753215b3563&pid=1-s2.0-S0959152423000367-main.pdf)

9. Cold atmospheric pressure plasma for the sanitation of conveyor belt materials: Decontamination efficacy against adherent bacteria and biofilms of Escherichia coli and effect on surface properties  
Innovative Food Science & Emerging Technologies 31 December 2022 Volume 84 (Cover date: March 2023) 103260  
Qingyang Wang, Nathalie Lavoine, Deepti Salvi  
[https://www.sciencedirect.com/science//pii/S1466856422003459/pdfft?md5=82a0a355b578984516c3d8df745a23c6&pid=1-s2.0-S1466856422003459-main.pdf](https://www.sciencedirect.com/science/pii/S1466856422003459/pdfft?md5=82a0a355b578984516c3d8df745a23c6&pid=1-s2.0-S1466856422003459-main.pdf)

10. Robust kernel principal component analysis and its application in blockage detection at the turn of conveyor belt  
Measurement 9 December 2022 Volume 206 (Cover date: January 2023) 112283  
Xin Sha, Naizhe Diao  
[https://www.sciencedirect.com/science//pii/S0263224122014798/pdfft?md5=fa8762973307896da5bc62667fffb169&pid=1-s2.0-S0263224122014798-main.pdf](https://www.sciencedirect.com/science/pii/S0263224122014798/pdfft?md5=fa8762973307896da5bc62667fffb169&pid=1-s2.0-S0263224122014798-main.pdf)

11. 1.2 V differential difference current conveyor using MIGD MOST technique and its applications  
AEU - International Journal of Electronics and Communications 26 October 2022 Volume 158 (Cover date: January 2023) 154445  
Montree Kumngern, Fabian Khateb, Manurak Rattanasuttikan  
[https://www.sciencedirect.com/science//pii/S1434841122003156/pdfft?md5=a8ed9e873a9dbe6d03e76d336304d213&pid=1-s2.0-S1434841122003156-main.pdf](https://www.sciencedirect.com/science/pii/S1434841122003156/pdfft?md5=a8ed9e873a9dbe6d03e76d336304d213&pid=1-s2.0-S1434841122003156-main.pdf)

12. Discrete element analysis on dynamic characteristics of directional material flow driven by horizontal trough–free screw conveyor  
Powder Technology 23 January 2023 Volume 418 (Cover date: 15 March 2023) 118276  
Hong Ren, Wenjun Meng, Xiaoxia Zhao  
[https://www.sciencedirect.com/science//pii/S0032591023000608/pdfft?md5=7d5f7e395fdfbd66ad86c34628205487&pid=1-s2.0-S0032591023000608-main.pdf](https://www.sciencedirect.com/science/pii/S0032591023000608/pdfft?md5=7d5f7e395fdfbd66ad86c34628205487&pid=1-s2.0-S0032591023000608-main.pdf)

13. Machine vision based damage detection for conveyor belt safety using Fusion knowledge distillation  
Alexandria Engineering Journal 25 March 2023 Volume 71 (Cover date: 15 May 2023) Pages 161-172  
Xiaoqiang Guo, Xinhua Liu, Zhixiong Li  
[https://www.sciencedirect.com/science//pii/S1110016823001965/pdfft?md5=60f0ac9d2fa4dd68fd361f24166dc267&pid=1-s2.0-S1110016823001965-main.pdf](https://www.sciencedirect.com/science/pii/S1110016823001965/pdfft?md5=60f0ac9d2fa4dd68fd361f24166dc267&pid=1-s2.0-S1110016823001965-main.pdf)

14. Prediction of chemical intramuscular fat and visual marbling scores with a conveyor vision scanner system on beef portion steaks  
Meat Science 14 February 2023 Volume 199 (Cover date: May 2023) 109141  
L. Pannier, T. M. van de Weijer, G. E. Gardner  
[https://www.sciencedirect.com/science//pii/S0309174023000475/pdfft?md5=aa09e8a9c7b077c507990e497e941ffd&pid=1-s2.0-S0309174023000475-main.pdf](https://www.sciencedirect.com/science/pii/S0309174023000475/pdfft?md5=aa09e8a9c7b077c507990e497e941ffd&pid=1-s2.0-S0309174023000475-main.pdf)

15. A novel second generation current conveyor (CCII)-based high frequency memristor model  
Microelectronic Engineering 23 January 2023 Volumes 271–272 (Cover date: 1 March 2023) 111938  
Prashant Kumar, Brajesh Kumar Kaushik, Rajeev Kumar Ranjan  
[https://www.sciencedirect.com/science//pii/S0167931723000035/pdfft?md5=7cd41eb5160b8f9c285add845bf48b8e&pid=1-s2.0-S0167931723000035-main.pdf](https://www.sciencedirect.com/science/pii/S0167931723000035/pdfft?md5=7cd41eb5160b8f9c285add845bf48b8e&pid=1-s2.0-S0167931723000035-main.pdf)

16. Electrical capacitance tomography-based estimation of slug flow parameters in horizontally aligned pneumatic conveyors  
Powder Technology 7 March 2023 Volume 420 (Cover date: 15 April 2023) 118418  
Thomas Suppan, Markus Neumayer, Hannes Wegleiter  
[https://www.sciencedirect.com/science//pii/S0032591023002024/pdfft?md5=bd9bb03eb4ee80ed123702e1e4ff01c4&pid=1-s2.0-S0032591023002024-main.pdf](https://www.sciencedirect.com/science/pii/S0032591023002024/pdfft?md5=bd9bb03eb4ee80ed123702e1e4ff01c4&pid=1-s2.0-S0032591023002024-main.pdf)

17. Online p size analysis on conveyor belts with dense convolutional neural networks  
Minerals Engineering 14 February 2023 Volume 193 (Cover date: March 2023) 108019  
Yihao Fu, Chris Aldrich  
[https://www.sciencedirect.com/science//pii/S089268752300033X/pdfft?md5=dff7afb7693061d7556af8a376630c94&pid=1-s2.0-S089268752300033X-main.pdf](https://www.sciencedirect.com/science/pii/S089268752300033X/pdfft?md5=dff7afb7693061d7556af8a376630c94&pid=1-s2.0-S089268752300033X-main.pdf)

**2. Springer**

1. A new machine vision detection method for identifying and screening out various large foreign objects on coal belt conveyor lines  
Lili Dai, Xu Zhang, Paolo Gardoni, He Lu, Xinhua Liu… in Complex & Intelligent Systems (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs40747-023-01011-9.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s40747-023-01011-9.pdf?pdf=core)  
  
2. The parcel hub scheduling problem with limited conveyor capacity and controllable unloading speeds  
Stefan Bugow, Carolin Kellenbrink in OR Spectrum (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs00291-022-00702-y.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s00291-022-00702-y.pdf?pdf=core)  
  
3. Conveyor operations in distribution centers: modeling and optimization  
Farzaneh Karami, Mahdi Fathi, Panos M. Pardalos in Optimization Letters (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs11590-022-01912-7.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s11590-022-01912-7.pdf?pdf=core)  
  
4. Fault diagnosis method of belt conveyor idler based on sound signal  
Yahui Zhang, Siyan Li, Aimin Li… in Journal of Mechanical Science and Technolo… (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs12206-022-1208-1.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s12206-022-1208-1.pdf?pdf=core)  
  
5. Use of coupled TG-FTIR and Py-GC/MS to study combustion characteristics of conveyor belts in coal mines  
Duo Zhang, Maoxia Liu, Hu Wen, Jun Deng… in Journal of Thermal Analysis and Calorimetry (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs10973-022-11899-z.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s10973-022-11899-z.pdf?pdf=core)  
  
6. Fault identification of a chain conveyor based on functional data feature engineering and optimized multi-layer kernel extreme learning machine  
Hao Wen, Baolin Hou, Xin Jin in Journal of Mechanical Science and Technology (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs12206-023-0405-x.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s12206-023-0405-x.pdf?pdf=core)  
  
7. Bulk material flow measurement based only on a smart camera fixed above a moving belt conveyor  
Naji Guedri, Rached Gharbi in Multimedia Tools and Applications (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs11042-022-13893-x.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s11042-022-13893-x.pdf?pdf=core)  
  
8. Real-time anomaly detection system within the scope of smart factories  
Cihan Bayraktar, Ziya Karakaya, Hadi Gökçen in The Journal of Supercomputing (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs11227-023-05236-w.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s11227-023-05236-w.pdf?pdf=core)  
  
9. A centernet-based direct detection method for mining conveyer belt damage  
Mengchao Zhang, Ningxia Sun, Yuan Zhang… in Journal of Ambient Intelligence and Humani… (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs12652-023-04566-0.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s12652-023-04566-0.pdf?pdf=core)  
  
10. Scheduling a pick and place packaging line  
Tommaso Schettini, Federico Malucelli, Helena Ramalhinho in Journal of Scheduling (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs10951-022-00755-5.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s10951-022-00755-5.pdf?pdf=core)  
  
11. Flipped Voltage Follower-Based Voltage Conveyors: Investigation and Possible Enhancements  
Costas Psychalinos, Abdullah Yesil… in Circuits, Systems, and Signal Processing (2023)  
[https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007%2Fs00034-022-02230-0.pdf?pdf=core](https://link-springer-com.dbvista.idm.oclc.org/content/pdf/10.1007/s00034-022-02230-0.pdf?pdf=core)

    Nguồn: Cục Thông tin khoa học và công nghệ quốc gia