

La libreria documentale Moldex3D sull'utilizzo di materiali compositi rinforzati con fibre



L'utilizzo di materiali rinforzati con fibre (vetro, carbonio, etc..) che soddisfano sia le esigenze di leggerezza sia quelle strutturali, sono ormai una delle principali tendenze del settore a livello mondiale e costituisce ormai uno degli indirizzi principali nello sviluppo di nuovi compound.

CoreTech Systems Co., Ltd. (Moldex3D) offre funzionalità di simulazione complete per i compositi più complessi e detiene anche la tecnologia e la ricerca all'avanguardia in questo campo (best-in-class technology).

Ad esempio, iARD-RPR, un nuovo modello di orientamento delle fibre inventato da Moldex3D, rappresenta un importante passo avanti.

In questo modello teorico, sono necessari solo tre parametri per prevedere con precisione l'orientamento anisotropico delle fibre in geometrie complesse e nella simulazione dello stampaggio a iniezione.

La tecnologia di simulazione dei compositi di Moldex3D è stata anche riconosciuta in tutto il mondo e brevettata.

Infatti, ha ricevuto brevetti statunitensi e i relativi documenti di ricerca sono pubblicati su numerose riviste prestigiose tra cui Journal of Rheology® e Polymer Composites.

Abbiamo anche più raccolte di tali articoli ricevuti su riviste specializzate.

Per visualizzarli, visita la **documentazione tecnica di Moldex3D**, la biblioteca di conoscenze per i professionisti del settore accademico e dell'industria della plastica.

Se sei interessato alla ricerca di Moldex3D sulla simulazione di fibre e compositi, segui il [portale di ricerca](#) del Dr. Ivor Tzeng, Project Manager presso la Divisione R & S di prodotti Moldex3D, di cui di seguito hai uno stralcio:

Moldex3D's Published Research Papers in Composites Field

[1] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Phenomenological Improvements to Predictive Models of Fiber Orientation in Concentrated Suspensions." J Rheol 57 1597-1631 (2013).

<https://sor.scitation.org/doi/10.1122/1.4821038>

[2] Foss, P. H., H.-C. Tseng, J. Snawerdt, Y.-J. Chang, W.-H. Yang, and C.-H. Hsu, "Prediction of Fiber Orientation Distribution in Injection Molded Parts Using Moldex3d Simulation." Polym Compos 35 671-680 (2014).

<https://onlinelibrary.wiley.com/doi/abs/10.1002/pc.22710>

[3] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "An Objective Tensor to Predict Anisotropic Fiber Orientation in Concentrated Suspensions." J Rheol 60 215-224 (2016).

<https://sor.scitation.org/doi/10.1122/1.4939098>

[4] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Numerical Prediction of Fiber Orientation and Mechanical Performance for Short/Long Glass and Carbon Fiber-Reinforced Composites." Compos Sci and Technol 144 51-56 (2017).

<https://www.sciencedirect.com/science/article/pii/S0266353816318802>

- [5] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Improved Fiber Orientation Predictions for Injection Molded Fiber Composites." Composites Part A: Applied Science and Manufacturing 99 65-75 (2017).
<https://www.sciencedirect.com/science/article/pii/S1359835X17301537>
- [6] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "An Integration of Microstructure Predictions and Structural Analysis in Long-Fiber-Reinforced Composite with Experimental Validation." Int Polym Process 32 455-466 (2017).
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<https://www.sciencedirect.com/science/article/pii/S1359835X17303974>
- [8] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Numerical Predictions of Fiber Orientation and Mechanical Properties for Injection-Molded Long-Glass-Fiber Thermoplastic Composites." Compos Sci and Technol 150 181-186 (2017).
<https://www.sciencedirect.com/science/article/pii/S0266353817308242>
- [9] Favaloro, A. J., H.-C. Tseng, and R. B. Pipes, "A New Anisotropic Viscous Constitutive Model for Composites Molding Simulation." Composites Part A: Applied Science and Manufacturing 115 112-122 (2018).
<https://www.sciencedirect.com/science/article/pii/S1359835X18303816>
- [10] Huang, C.-T. and H.-C. Tseng, "Simulation Prediction of the Fiber Breakage History in Regular and Barrier Structure Screws in Injection Molding." Polym Eng Sci 58 452-459 (2018).
<https://onlinelibrary.wiley.com/doi/abs/10.1002/pen.24660>
- [11] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Accurate Predictions of Fiber Orientation and Tensile Modulus in Short-Fiber-Reinforced Composite with Experimental Validation." Polym Compos 39 2847-2859 (2018).
<https://onlinelibrary.wiley.com/doi/abs/10.1002/pc.24277>
- [12] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Numerical Predictions of Fiber Orientation for Injection Molded Rectangle Plate and Tensile Bar with Experimental Validations." Int Polym Process 33 96-105 (2018).
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- [13] Tseng, H.-C., R.-Y. Chang, and C.-H. Hsu, "Numerical Predictions of Fiber Orientation and Mechanical Properties for Injection-Molded Long-Carbon-Fiber Thermoplastic Composites." Polym Compos 39 3726-3739 (2018).
<https://onlinelibrary.wiley.com/doi/abs/10.1002/pc.24403>
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