

# Resource Summary Report

Generated by [kravitz2](#) on Aug 1, 2026

## Polyester

RRID:SCR\_003602

Type: Tool

### Proper Citation

Polyester (RRID:SCR\_003602)

### Resource Information

**URL:** <https://github.com/alyssafraze/polyester>

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**Description:** An R package designed to simulate RNA sequencing experiments with differential transcript expression. Given a set of annotated transcripts, it will simulate the steps of an RNA-seq experiment (fragmentation, reverse-complementing, and sequencing) and produce files containing simulated RNA-seq reads. Simulated reads can be analyzed using a choice of downstream analysis tools. Polyester has a built-in wrapper function to simulate a case/control experiment with differential transcript expression and biological replicates. Users are able to set the levels of differential expression at transcripts of their choosing. This means they know which transcripts are differentially expressed in the simulated dataset, so accuracy of statistical methods for differential expression detection can be analyzed. Polyester offers several unique features: \* Built-in functionality to simulate differential expression at the transcript level \* Ability to explicitly set differential expression signal strength \* Simulation of small datasets, since large RNA-seq datasets can require lots of time and computing resources to analyze \* Generation of raw RNA-seq reads, as opposed to alignments or transcript-level abundance estimates \* Transparency/open-source code

**Resource Type:** data analysis software, software application, software resource, data processing software, simulation software

**Keywords:** standalone software, unix/linux, mac os x, windows, r, rna-seq

**Resource Name:** Polyester

**Resource ID:** SCR\_003602

**Alternate IDs:** OMICS\_04272

**Record Creation Time:** 20220129T080219+0000

**Record Last Update:** 20260801T190215+0000

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## Ratings and Alerts

No rating or validation information has been found for Polyester.

No alerts have been found for Polyester.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 487 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [kravitz2](#).

Wu H, et al. (2025) Measurements of face mask's capability to block ionizing radiation. Scientific reports, 15(1), 6516.

Deng X, et al. (2025) A Wearable Triboelectric Nanogenerator Based on Polyester-Paper Cloth for Mechanical Energy Harvesting and Running Motion Sensing. ChemistryOpen, 14(6), e202400373.

Tepa-Yotto GT, et al. (2025) Plant Signaling Mediates Interactions Between Fall and Southern Armyworms (Lepidoptera: Noctuidae) and Their Shared Parasitoid Cotesia icipe (Hymenoptera: Braconidae). Insects, 16(6).

Song K, et al. (2025) DOLPHIN advances single-cell transcriptomics beyond gene level by leveraging exon and junction reads. Nature communications, 16(1), 6202.

Fischer NM, et al. (2025) Two distinct host-specialized fungal species cause white-nose disease in bats. Nature, 642(8069), 1034.

Lee JH, et al. (2025) Redefining the limits of actuating fibers via mesophase control: From contraction to elongation. Science advances, 11(3), eadt7613.

Wu D, et al. (2025) Life cycle assessment of a luxury fashion brand's HPP event booth in the context of circular economy. Scientific reports, 15(1), 5153.

Huang P, et al. (2025) Laser-Ablative Structuring of Elastic Bandages-An Experimental Study. Nanomaterials (Basel, Switzerland), 15(9).

Singh NP, et al. (2025) Tree-based differential testing using inferential uncertainty for RNA-seq. Genome research, 35(10), 2326.

Greener JG, et al. (2025) Reversible molecular simulation for training classical and machine-learning force fields. Proceedings of the National Academy of Sciences of the United States of America, 122(22), e2426058122.

Fan S, et al. (2025) Strain-Sensitive Thermochromic Smart Electronic Skin for Joint and Spine Healthcare Applications. Advanced science (Weinheim, Baden-Wurttemberg,

Germany), 12(37), e07605.

Tang C, et al. (2025) A deep learning-enabled smart garment for accurate and versatile monitoring of sleep conditions in daily life. *Proceedings of the National Academy of Sciences of the United States of America*, 122(7), e2420498122.

Sherman RA, et al. (2025) Expanding access to maggot containment dressings through redesign and innovation. *International wound journal*, 22(1), e70100.

Guo W, et al. (2025) A barley pan-transcriptome reveals layers of genotype-dependent transcriptional complexity. *Nature genetics*, 57(2), 441.

Soureh AS, et al. (2025) Investigating the effect of fiber arrangement on tensile properties of two-dimensional hybrid braided composite rods. *Scientific reports*, 15(1), 3116.

Ali AA, et al. (2025) Novel Azo dyes containing a hydrazide-hydrazone moiety for dyeing polyester fabric. *Scientific reports*, 15(1), 4360.

Yu A, et al. (2025) Advanced design of 3D knitted padding for wearable cushioning in knee protector. *Scientific reports*, 15(1), 11091.

Ahmed Abdelkarem Mohamed A, et al. (2025) Assessing the Safety and Aesthetic Benefits of Reduced Port Bikini-Line Sleeve Gastrectomy (RBSG): An Initial Report. *Obesity surgery*, 35(9), 3491.

Kuroda M, et al. (2025) Settling and Along-Isopycnal Subduction of Small Microplastics Into Subsurface Layers of the Western North Pacific Ocean. *Environmental science & technology*, 59(38), 20716.

Sajankila N, et al. (2025) Staged thoracoscopic internal traction approach for early repair of long-gap esophageal atresia (LGEA) with distal tracheoesophageal fistula (TEF). *Pediatric surgery international*, 41(1), 70.