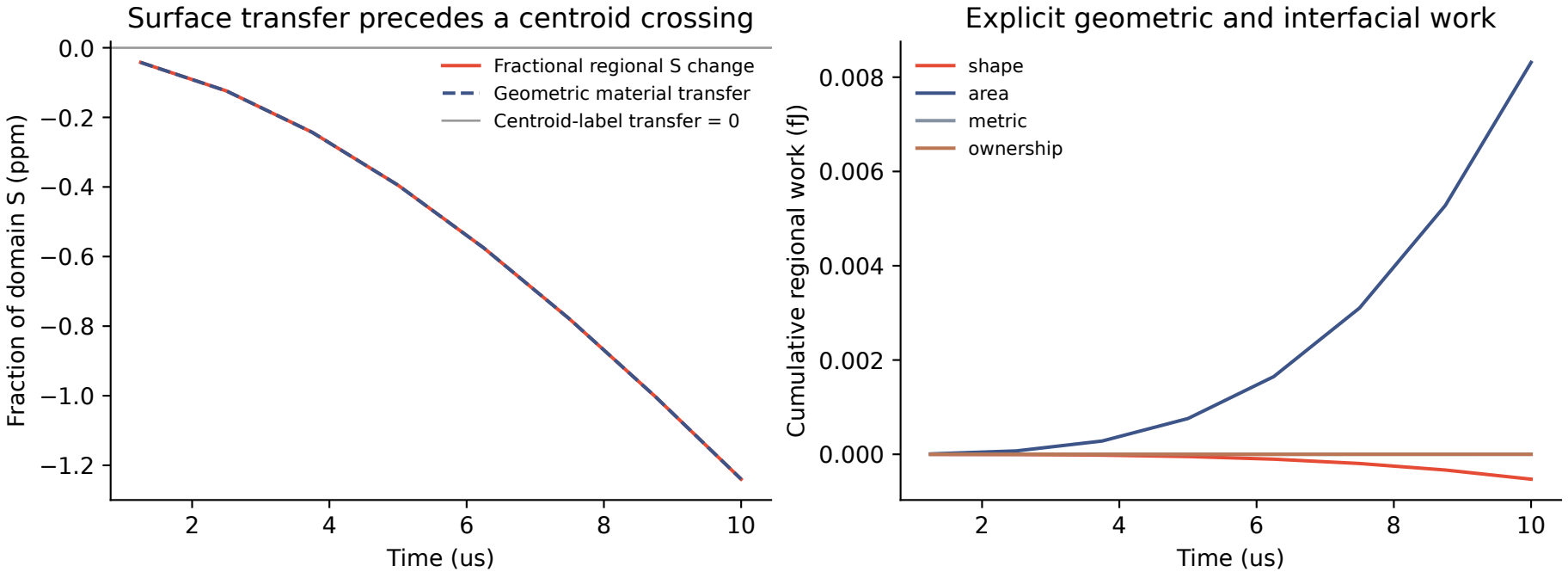

Surface transfer precedes a centroid crossing
Fraction of domain S (ppm)
0.0
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
2
4
6
8
10
Time (us)
Fractional regional S change
Geometric material transfer
Centroid-label transfer = 0
Explicit geometric and interfacial work
Cumulative regional work (fJ)
0.008
0.006
0.004
0.002
0.000
2
4
6
8
10
Time (us)
shape
area
metric
ownership