

Figure S8 | Basins of attraction and success statistics across random initializations in bounded parameter space. (a) Distribution of the final complex-domain fit error (SSE) obtained from multi-start bounded optimizations as a function of the initialization scale σ applied in normalized u -space (larger σ corresponds to broader random perturbations around the baseline). The dashed line indicates the classical baseline SSE for reference. (b) Initial SSE versus final SSE for all runs, separating trajectories that converge to the low-error basin (“success”) from those that remain trapped in higher-error regions (“other”), highlighting the nonconvex structure of the EIS inverse problem. (c) Summary rates versus σ : success rate (fraction of runs converging to the near-best basin) and boundary-hit rate (fraction of solutions pinned near parameter bounds), providing a practical measure of solver stability and the size of the dominant attraction basin under increasingly diverse starting points.

