CUSTOMER STORY

Grounding Early-Stage R&D in the Literature, Faster

How Dr. Shimon Maksymenko, PhD, used REACTOR's chemistry-native reasoning to move from open research questions to immediately usable answers — saving hundreds of hours.

Background

Dr. Shimon Maksymenko is a PhD organic and development chemist with experience in the synthesis of small molecules and process improvement. At Celluflux ltd, an early-stage chemistry startup, his work centers on the kind of open-ended R&D where every directional choice needs to be defensible — and most need to be made fast.

The Challenge

Early-stage chemistry R&D is dependent on the quality of the initial research findings, especially literature, but good literature is not easy to ascertain. Keyword searches in SciFinder or Google Scholar can return hundreds of candidate papers. Most are not relevant. Of the ones that are, the chemist still has to download, skim, cross-reference, synthesize, and remember the thread later, sorting and filing any relevant insights for their particular research objective.

The friction is not accessibility, researchers know how to find papers but the cognitive load of bridging from "I have a question" to "I have a defensible answer I can act on" is significant, often amounting to hundreds of hours of searching. For a small team, the overhead compounds: context switches between tools, half-answered questions get shelved, repeated work lives in a notebook that is archived and rarely rechecked.

WHAT WAS NEEDED

A solution that could consistently bring relevant results as the researcher's context shifts with the dynamic nature of R&D.

"to my delight I've received comprehensive answers which I can immediately use in my further research"

Dr. Shimon Maksymenko, PhD — Organic & Development Chemist, Celluflux ltd.

How REACTOR Fit In

Shimon used REACTOR as the entry point for chemistry questions that required literature grounding. Each question went into a Research Space — a workspace that holds project context across queries, so each follow-up builds on the last rather than starting cold.

REACTOR does more than retrieve results. It runs a dedicated agentic workflow for chemistry-native search: it generates multiple relevant queries from the project context, searches across databases, ranks abstracts by relevance to the actual project, generates evidence-grounded summaries, and prioritizes results based on the accuracy of the paper to the total context of the research. The two-layer output — an initial summary for skimming, and full detail surfacing the most relevant papers — lets the chemist move at the pace of their own thinking. REACTOR can run this workflow on over 300 papers in mere minutes, compounding tens of hours of searching into a fraction of the time. Each result includes a retrieval option, so the chemist can view the source paper and add it directly into the conversation context.

180+	minutes	300+
PAPERS ANALYZED	NOT HOURS	PAPER WORKFLOW CAPACITY

The Outcome

Shimon analyzed over 180 research papers in mere minutes — a workload that would otherwise have consumed days of manual searching. The throughput is the visible win. The deeper one is what it unlocks: more research questions explored before committing to an experimental direction, more hypotheses tested against existing literature, and a higher confidence level on every directional call.

Equally important: every answer arrived with citations and source-level traceability. When Shimon reached a conclusion, he could verify the reasoning back to the original paper — defensibility that matters most in early-stage R&D, where each directional bet shapes the next experiment. No tab graveyards. No manual synthesis. The literature became a working tool, not a backlog.

What This Means for Early-Stage Chemistry Teams

Early-stage chemistry teams operate under two pressures that pull against each other: speed (limited runway, narrow exploration windows, investor expectations) and rigor (every wasted experiment is a meaningful share of the budget). Most R&D tooling forces a choice between the two, fast or careful, not both.

REACTOR helps to remove that choice. Chemistry-native reasoning brings the rigor of the literature into a workflow that operates with improved credibility, turning literature engagement from an overhead cost into research leverage. Teams stop choosing between fast and careful, and start operating with both.

For a small team, that is the difference between iterating cautiously and iterating with conviction. Built by scientists, for scientists — designed to make the literature a daily working surface, not a quarterly catch-up.

TIME BACK

Weeks compressed into minutes

What used to take days of manual literature work now resolves in a single REACTOR session.

DECISION CONFIDENCE

Every call traceable to source

Citation-grounded summaries make every directional bet defensible — the rigor is built in, not bolted on.

COMPOUNDING LEVERAGE

Research that builds on itself

Research Spaces hold project context across queries — so each follow-up extends the last instead of starting cold.

AT A GLANCE

User: Dr. Shimon Maksymenko, PhD

Field: Organic & Development Chemistry

Role: R&D Chemist

Company: Celluflux ltd

Active in REACTOR: Q1 2026 onward

REACTOR CAPABILITIES ENGAGED

- Chemistry-native literature discovery
- Agentic multi-query search across databases
- Abstract ranking by project relevance
- Evidence-grounded summaries with citations
- Research Spaces for project context
- Two-layer output (summary + detail)
- Built-in PDF reader and source retrieval