

Physical Review Daily

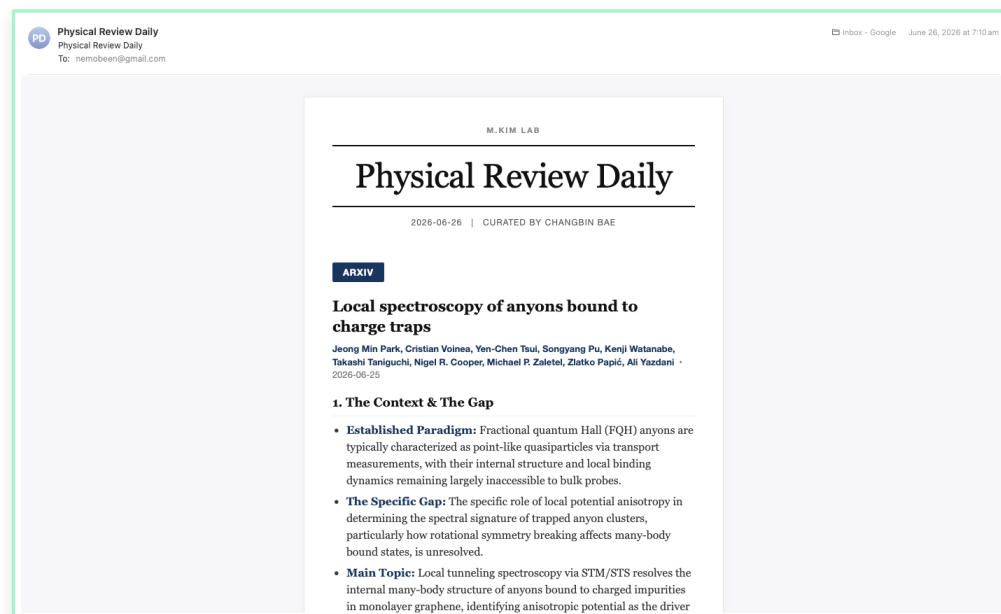
A personalized research-paper curation newsletter for researchers

Every morning, we hand-pick only the papers you need and deliver them by email

Changbin Bae, M.S. student, Prof. Minsoo Kim's Lab, Department of Physics, Sogang University

Every morning, it automatically checks the new papers posted across multiple paper sites (arXiv, Nature, APS, ACS, Science, etc.). **The AI algorithm** picks out only the highly relevant papers based on each user's registered **research interest**, and organizes the key content of each paper into an easy-to-understand newsletter.

You no longer need to browse multiple sites one by one to search for relevant papers. At a set time each day, you can find a newsletter—curated with only the papers relevant to your research field—right in your email inbox.



2 Background

PRD

For a researcher, continuously following up on the latest papers is not merely about acquiring information. Grasping the overall storyline of your field—where it is heading, what approaches other groups are taking, and which limitations have newly been overcome—is essential to sustaining good research.

In graduate school, however, with experiments, conferences, and presentation prep all overlapping, it is realistically hard to find time to keep up with the flood of papers published every day.

Physical Review Daily was started precisely to solve this problem. **Helping you keep up with the developments unfolding in your own research field even amid a busy schedule** is the goal of this service.

3 User Guide

PRD

Physical Review Daily

2026-07-02 | CHANGBIN BAE

ARXIV

Observation of Intrinsic Anderson Localization in Few-Layer ReS₂

Shreya Paul, Pritam Das, Devarshi Chakrabarty, Shamashis Sengupta, Sajal Dhara
• 2026-07-01

1. The Context & The Gap

- **Established Paradigm:** Anderson localization in 2D semiconductors is typically characterized by variable-range hopping (VRH) transport; however, quantitative extraction of intrinsic parameters is obscured by extrinsic disorder from fabrication-induced contamination and interface charge trapping.
- **The Specific Gap:** Prior studies on ReS₂ failed to isolate intrinsic localization due to dominant extrinsic disorder from standard dielectrics (e.g., SiO₂) and electrolyte gating methods.
- **Main Topic:** Isolation of intrinsic Anderson localization in few-layer AA-stacked ReS₂ via all-dry van der Waals assembly with hBN gate dielectric, eliminating interface charge trapping.

2. The Core Phenomenon & Proposed Mechanism

- **The Observation:** Temperature-dependent transport exhibits a crossover from nearest-neighbor hopping (NNH) to two-dimensional

The newsletter format is as follows.

- ✓ It shows the date and the recipient's name.
- ✓ Papers are grouped and itemized by journal site.
- ✓ Clicking a paper title takes you to the corresponding journal site.
- ✓ The newsletter summarizes each paper's content according to the template.

On weekday mornings, an HTML newsletter is embedded in the email body and sent to the user.

If you would like to see the newsletter format in more detail, please refer to the PRD_newsletter_example.html file.



User Name, Email Address

Name

Email Address (one per line; multiple allowed)

you@example.com



Research Interest (⚠️ The AI algorithm is optimized for English text. Please write in English.)

Research Interests

- This text is used to judge how relevant each paper is to you. The more detailed, the more accurate.
- The AI algorithm works best with English text, so please write in English. Even if you write in English, choosing Korean as the article language will deliver the newsletter in Korean.

▶ [View example](#)



- ✓ This information is used to assess each paper's relevance.
- ✓ Relevance is assessed based on the paper's title and abstract.



Subscribed Journals

✓ If there is another journal you would like served, you can request it on the web page. (Only journals that Sogang University subscribes to are available.)

Currently supported journals

arXiv	cond-mat.mes-hall, cond-mat.supr-con, cond-mat.mtrl-sci, physics.app-ph, quant-ph
Nature	Nature, Nature Materials, Nature Physics, Nature Nanotechnology, Nature Communications
APS	Physical Review Letters
ACS	ACS Nano, Nano Letters
Science	Science, Science Advances - Physical and Materials Sciences
Advanced	Advanced Materials, Advanced Science
AIP	Applied Physics Letters



Delivery Schedule

Delivery Frequency

Weekly/Custom



Delivery Days (multiple allowed)

☐ Mon

☐ Tue

☐ Wed

☐ Thu

☐ Fri

✓ Newsletters are delivered daily, or on specified days of the week (Weekly / Custom).



Newsletter Language

- ✓ The newsletter language can be set to English or Korean.
- ✓ Newsletters are written in English by default, then translated into Korean before delivery.
- ✓ For physics-concept terms that are often hard to understand once translated into Korean, the newsletter keeps them in the original English.



Newsletter Template

- ✓ Each paper is written up as an article following the newsletter template format.
- ✓ If no template is specified, the default template is applied.
- ✓ If you have a preferred summary format, you can use your own template.

Default Template

Analyze the provided research paper text and extract its core findings into the exact Markdown structure below. Ignore titles, affiliations, and references. Focus strictly on the observed physical phenomena, data, and established theoretical frameworks.

Use bullet points and concise phrasing. Do not write in paragraphs.

1. The Context & The Gap

* Established Paradigm: [1-2 sentences on the accepted model in this sub-field.]

* The Specific Gap: [1 sentence on the anomaly or limitation this paper resolves.]

* Main Topic: [1 sentence on the main contribution that overcomes the gap.]

2. The Core Phenomenon & Proposed Mechanism

* The Observation: [1-2 sentences on the primary physical behavior observed.]

* The Mechanism: [1 sentence on the specific physical mechanism (e.g., symmetry breaking).]

3. Signature vs. Claim Analysis

* Key Signatures:

* [Signature 1]

* [Signature 2]

* [Signature 3]

						
User Name	Email Address	Research Interest	Subscribed Journals	Delivery Schedule	Newsletter Language	Newsletter Template
Name to display	Email to receive the newsletter	Description of your research interests	Journal sites to receive newsletters	Day(s) to receive the newsletter	Language to receive the newsletter	Preferred newsletter format
Required	Required	Required	Required	Required	Required	Optional

- ✓ The user information above can be entered at the sign-up link (<https://physicalreviewdaily.duckdns.org/register>).
- ✓ After your registration is approved, you can edit your information at the update link that is sent to you.
- ✓ The update link can also be found at the bottom of each newsletter.
- ✓ Updated information takes effect from the next delivery.

4 Service Expansion Plan

This service release is a beta test

- ✓ Physical Review Daily has been running in Prof. Minsoo Kim's lab since March 2026 and now has roughly four months of operating experience.
- ✓ This release is a beta-test phase, rolled out first on a small scale to experimental research labs to ensure reliability.
- ✓ The goal is to improve service quality using feedback from the beta test, then expand the service across the entire Department of Physics.

Continuous, feedback-driven improvement

- ✓ We actively collect user feedback throughout the beta-test period.
- ✓ Improvements based on the collected feedback will be applied as quickly as possible.

If you have any questions about the service, please feel free to contact **Changbin Bae, M.S. student in Prof. Minsoo Kim's Lab, Department of Physics**. Thank you.

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