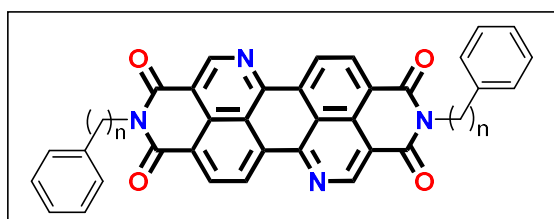
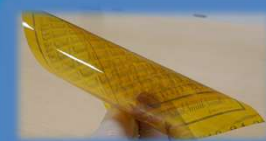


semi-
conductor

n-type organic semiconductors PhC2-BQQDI



n=2 PhC2-BQQDI
n=3 PhC3-BQQDI

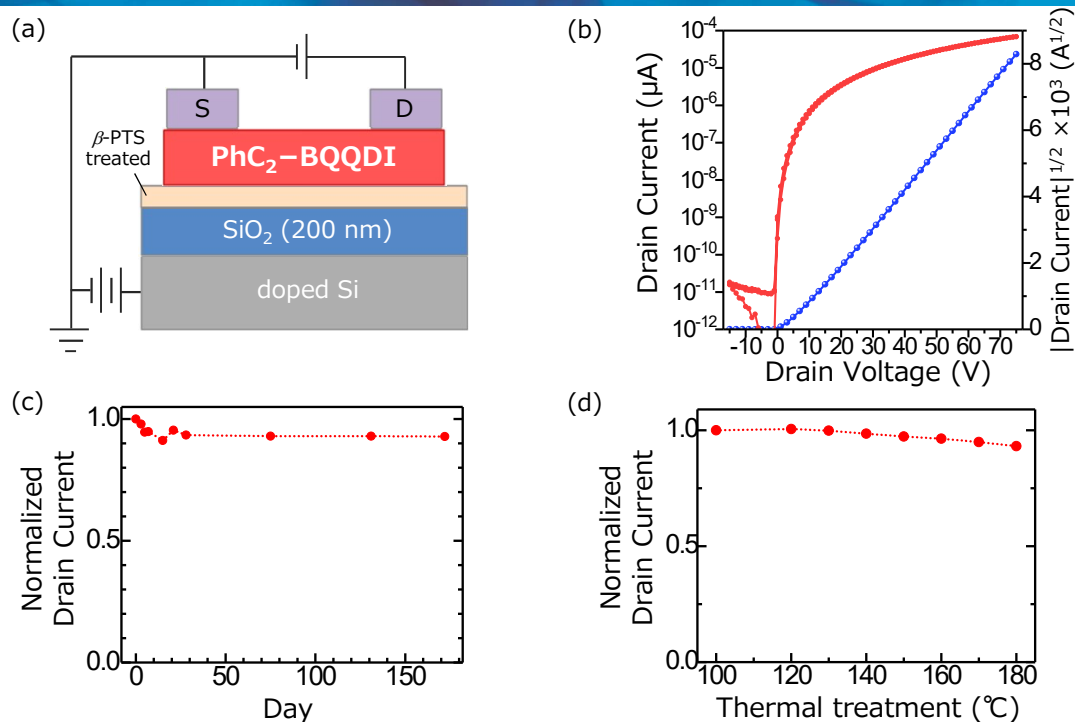


benzo[de]isoquinolino[1,8-gh]quinoline diimide (BQQDI)

Features

- ◇ **High electron mobility** $3 \text{ cm}^2/\text{Vs}$ (solution-crystallized single-crystalline thin-film transistors under ambient air)
 $>0.6 \text{ cm}^2/\text{Vs}$ (vacuum-deposited thin-film transistors)
- ◇ **High tolerance** High heat stress tolerance over 150°C and good bias stress tolerance (single-crystal OFET)
- ◇ **High stability** Long-term atmospheric stability regardless of device structure
Decreasing rate of electron mobility is less than 10%.
 - more than half a year by single-crystal OFET
 - more than one month by vacuum-deposited OFET

Solution-crystallized transistors (single crystal)

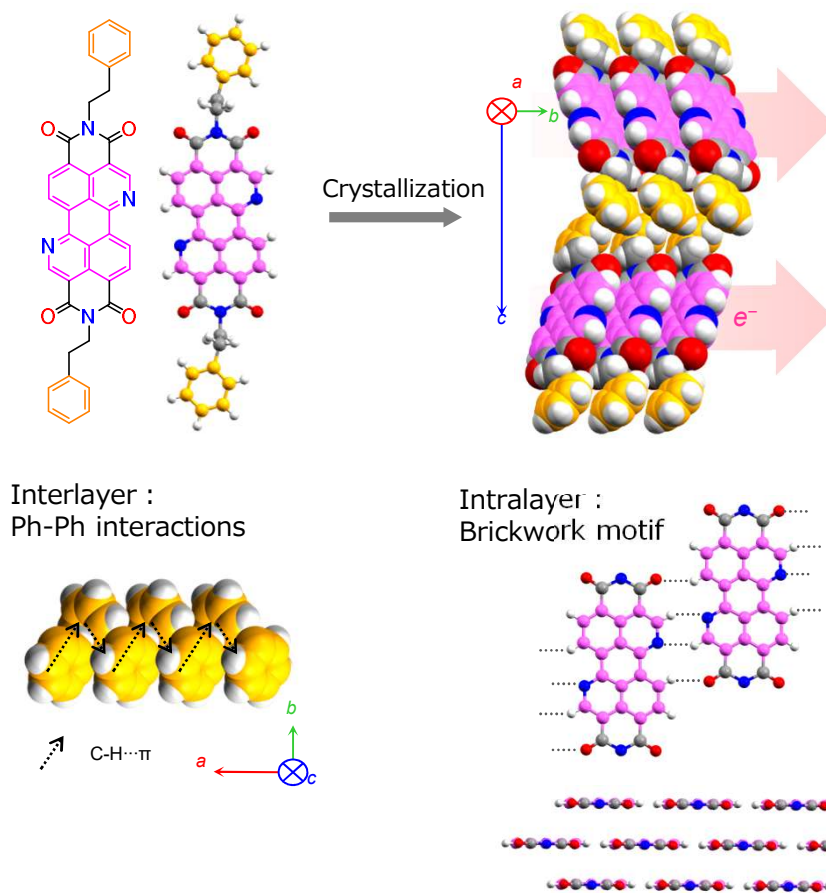


(a) TFT structure. (b) Transfer characteristic ($V_D = 75 \text{ V}$).

(c) Stability test for storage under atmosphere. (d) Heat-stress tolerance test (under argon atmosphere)

Single crystal structure

2D brickwork-type packing structures that enables charge-transport



<References>

- Okamoto, T., et al.: *Sci. Adv.*, **6**, eaaz0632 (2020). [Open-access article](#)
- Kumagai, S., et al.: *Chem. Mater.*, **32**, 9115 (2020).
- Kumagai, S., et al.: *Adv. Mater.*, **32**, 2003245 (2020).

<n-type organic semiconductors>

Code No.	Product Name	Package Size	Price
165-28601	PhC2-BQQDI [solution-crystallized thin-film] [vacuum-deposited thin-film]	100mg	800.00 USD
166-28871	PhC3-BQQDI [vacuum-deposited thin-film]	100mg	913.00 USD

<p-type organic semiconductors>

Code No.	Product Name	Package Size	Price
208-20821	TBBT-C ₄	100mg	825.00 USD
205-20831	TBBT-C ₁₀	100mg	825.00 USD

Listed products are intended for laboratory research use only, and not to be used for drug, food or human use. / Please visit FUJIFILM Wako Laboratory Chemicals site: <https://labchem-wako.fujifilm.com/> / This leaflet may contain products that cannot be exported to your country due to regulations. / Bulk quote requests for some products are welcomed. Please contact us.

FUJIFILM Wako Laboratory Chemicals site
<https://labchem-wako.fujifilm.com>



FUJIFILM Wako Pure Chemical Corporation
 1-2, Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
 Tel: +81 6 6203 3741 Fax: +81 6 6203 1999
ffwk-cserservice@fujifilm.com

FUJIFILM Wako Chemicals U.S.A. Corporation
 1600 Bellwood Road, Richmond, VA 23237, U.S.A.
 Toll-Free (U.S. only): +1 877 714 1920
 Tel: +1 804 271 7677 Fax: +1 804 271 7791
wkuslabchem@fujifilm.com

FUJIFILM Wako Chemicals (Hong Kong) Limited
 Room 1111, 11/F, International Trade Centre, 11-19 Sha Tsui Road,
 Tsuen Wan, N.T., Hong Kong
 Tel: +852-2799-9019 Fax: +852-2799-9808
wkhk.info@fujifilm.com

FUJIFILM Wako Chemicals Europe GmbH
 Fuggerstr 12, 41468 Neuss, Germany
 Tel: +49 2131 311 0 Fax: +49 2131 311 100
labchem_wkeu@fujifilm.com

FUJIFILM Wako (Guangzhou) Trading Corporation
 Room 3003, 30/F., Dong Shan Plaza 69, Xian Lie Zhong Road,
 Guangzhou, 510095, China
 Tel: +86-20-8732-6381 (Guangzhou) Tel: +86-21-6288-4751 (Shanghai)
 Tel: +86-10-6413-6388 (Beijing)
wkgz.info@fujifilm.com