

物理工学談話会

Electronic and magnetic properties of MXenes predicted by ab initio calculation

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会場：ZOOM会議 (ミーティングID: 918 3584 5030)

パスワードについては世話人もしくは物理工学ユニット教員にお問い合わせください

MXenes (2D transition metal carbides or nitrides) have recently attracted lots of attention because of their simple fabrication process and opening opened up many practical applications in the current technologies: in sensors, batteries, and energy conversion devices, and many others.

In this talk, I will demonstrate my recent discoveries of MXenes revealed by the state-of-art ab initio approach. In addition to a variety of properties of MXenes as insulator, metal, and magnet, we for the first time found electrified MXenes with exotic carbon trimer (C_3) structure unit. Our work thereby present a further possibility of MXenes for practical applications.

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