



Bo Chen



- Mobile devices are broadly used to handle sensitive data
 - A human rights worker collects evidence of atrocities in a region of oppression using his/her mobile device



- Conventional encryption may not work
 - Vulnerable to a **coercive attack**

An attacker forces the device's owner to disclose the decryption key

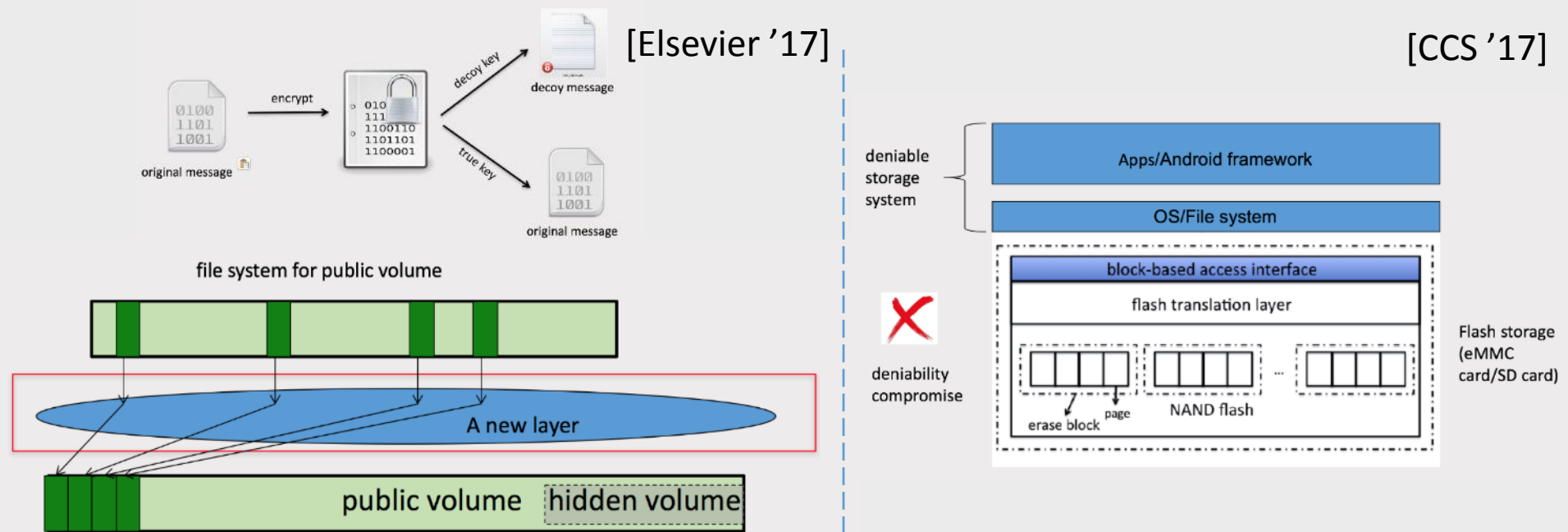
TELL ME YOUR KEY!!!





Deniable encryption storage for mobile devices

- The first **user friendly** deniable storage system for mobile devices [Elsevier '17]
- **Eliminate deniability compromise** in the underlying flash medium [CCS '17]



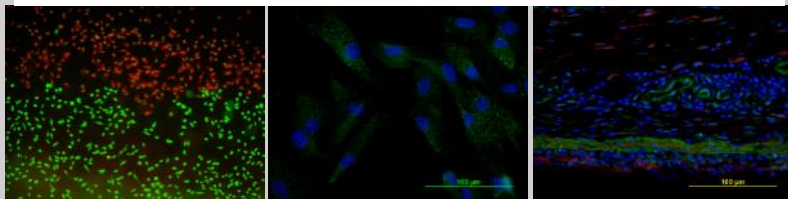
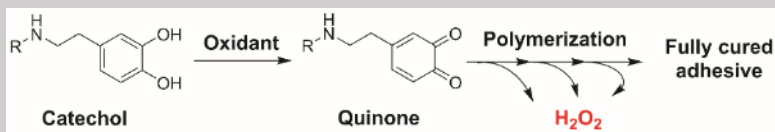
B. Chang, Y. Cheng, **B. Chen**, F. Zhang, W. Zhu, Y. Li, and Z. Wang. User-Friendly Deniable Storage for Mobile Devices. *Elsevier Computers & Security*, 2017. (to appear)

S. Jia, L. Xia, **B. Chen**, and P. Liu. DEFTL: Implementing Plausibly Deniable Encryption in Flash Translation Layer. In *Proceedings of ACM CCS '17*. (acceptance rate: 18%)

Bioadhesive for Tissue Repair and Regeneration



Polymeric Model System Development



Bruce P. Lee

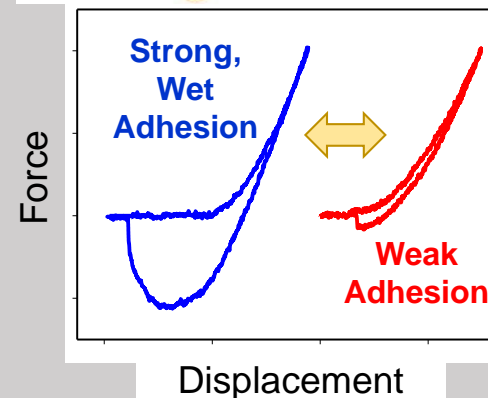
Biomimetic Biomaterials
Polymer Chemistry, Bioadhesive,
Smart Biomaterial and Adhesive



Chemistry from Mussel



Underwater Smart Adhesive



Re-shapeable Gel as Fit-to-Shape Sealant

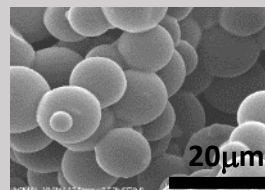


Remoldable Gel

Injectable Seal sutured anastomosis



Adhere to non-flat surface



Recyclable and Anti-Pathogenic Microparticles

