



What makes news in ASET related fields?

- Natural Disasters (destructive arthropods, floods, hunger etc)
- New Innovations?
- New research?
- New Publications?

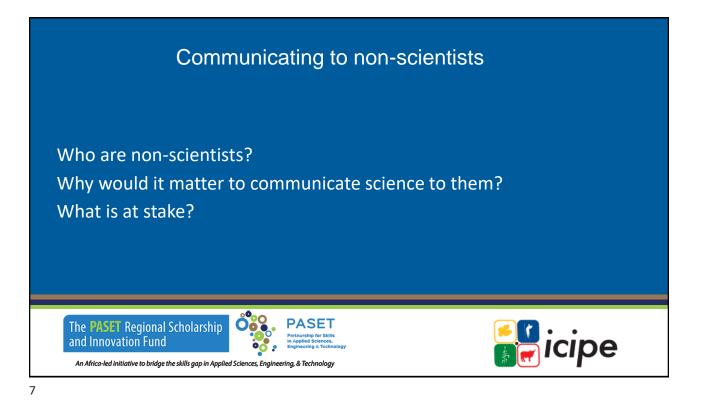
Why do you think that there is more <u>negative</u> than <u>positive</u> news shared about ASET? (By show of hands)

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# Why communicate to non-scientists?

- It is important to brand yourselves as young researchers and thought leaders, and raise you profile and visibility among key networks and to higher education stakeholders
- A wider outreach and sharing of content with a compelling narrative about your research as a unique, credible, legitimate and effective piece of scholarly work and contribution to the global knowledge hub.
- To Increase access to relevant and up-to-date content

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- Establish or join Communities of Practice beyond Technical working groups
- Collaboration and Networking
- To enable the translation, synthesis and packaging of research for mass adoption in alignment with your country's national developmental needs and Africa's continental aspirations.

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# An example of Communication to scientist Vs to nonscientists

Paper Title: Trends towards Effective Analysis of Fluorinated Compounds Using Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

## Scientific Version

Human activities have led to the establishment of a wide variety of fluorinated precursors. Interaction of these precursors with the environment creates novel fluorinated compounds (FCs). Yeung et al. (2016) reported that novel fluorinated chemical structures make up to 60-90% of total FCs in biological and environmental samples [1, 2]. Yamashita et al. (2004) further revealed that organisms found at the bottom of the food chain have at least higher concentrations of organofluorines which can neither be detected by liquid chromatographyhigh-performance electrospray ionization-mass spectrometry (HPLC-ESI-MS) nor ionizable by atmospheric pressure chemical ionization (APCI) [3].

#### **Non- Scientific Version**

Exposure to fluoride is known to cause molted teeth and weak bones in animals particularly humans. Its exposure and toxicity are maximized when it reacts with the environmental aspects of water, air and soil to form novel fluorinated compounds (FCs). With the advancement in analytical methods, a limited number of FCs have been identified in biological and environmental samples but these methods cannot capture all novel FCs due to lack of authentic standards. Currently. Inductively coupled plasma-mass spectroscopy (ICP-MS) is the most promising analytical technique but conventionally it cannot analyze FCs.







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# An example from RSIF Scholar's papers on Communicating to non-scientists

### Paper Title: Improving the efficiency and stability of tin-based perovskite

solar cells using anilinium hypophosphite additive

#### Scientific Version

Tin (Sn) is a potential replacement for lead in organicinorganic perovskite solar cell (PVSC) technology due to the attractive optoelectronic properties of Sn-perovskites. However, the poor stability of Sn2+ ions is still the main hindrance for achieving highly stable and efficient Snbased PVSCs. In this work, anilinium hypophosphite (AHP) is introduced as a co-additive into a Sn-absorber perovskite precursor containing the tin fluoride (SnF2) additive. The incorporation of the AHP additive not only prohibits the phase separation of SnF2 but also passivates the perovskite films and finally results in absorbers with superior structural and optoelectronic properties. The underlying reason is related to the formation of a doublesalt complex (Sn(H2PO2)2-SnF2) through the interaction between AHP and SnF2.

#### **Non- Scientific Version**

Globally the projected demand for energy keeps intensifying due to rapid population escalation. Developing countries need efficient, and reliable clean energy to compete economically with developed countries. There is need to create efficient solar systems to convert the solar radiation energy which is abundantly available to a usable form. The quest for an efficient solar system has led to development of perovskite solar cells (PSCs). The most researched and successful PSCS is the lead-based perovskites which has achieved an efficiency above 25 %, but contain the toxic lead (not environmentally friendly and poisonous to both humans and animals). Tin has been considered as a lead replacement, but the low efficiency and poor stability of tin-perovskites pose the greatest challenge in its development towards commercialization.

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