

## #ENVIRONMENT

### Scented products cause indoor air pollution on par with car exhaust

Using scented products indoors changes the chemistry of the air, producing as much air pollution as car exhaust does outside, according to a new study. Researchers say that breathing in these nanosized particles could have serious health implications.



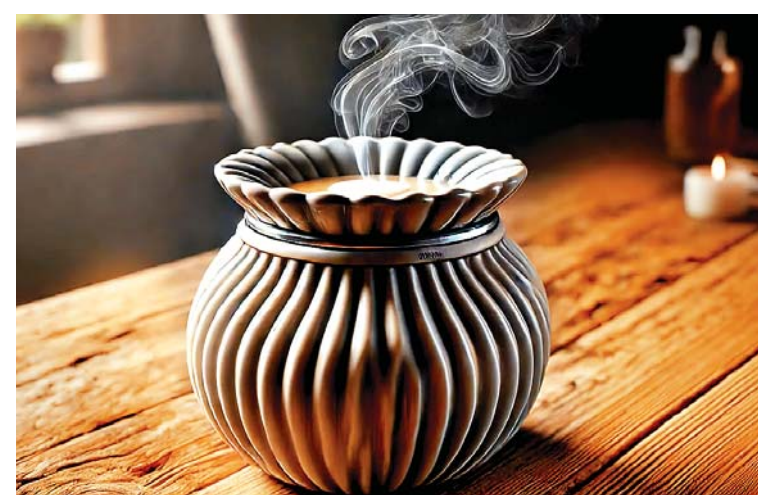
When you hear or see the words 'air pollution,' you most likely think of things like factories and car exhaust. That's pollution that is out there, outside your house. But have you thought about how you're contributing to air pollution inside, where you live, by using seemingly innocuous products like scented candles, non-combustible candles?

New research by Purdue University, the latest in a series of Purdue-led studies, examined how scented products, in this case, flame-free candles, are a significant source of nanosized particles, small enough to get deep into your lungs, posing a potential risk to respiratory health. "A forest is a pristine environment, but if you're using cleaning and aromatherapy products, full of chemically manufactured scents, to recreate a forest in your home, you're actually creating a tremendous amount of indoor air pollution, that you shouldn't be breathing in," said Nusrat Jung, an assistant professor in Purdue's Lyles School of Civil and Construction Engineering and co-corresponding author of the study. Scented wax melts are marketed as a flameless, smoke-free, non-toxic alternative to traditional candles, a safer way of making your home or office smell nice. To assess the truth of these claims, the researchers comprehensively measured the nanoparticles formed, when they warmed wax melts in their mechanically ventilated test house. The tiny house is actually an architectural engineering laboratory called the Purdue Zero Energy Design Guidance for Engineers (ZEDGE) lab. Designed and engineered to test the energy efficiency of a larger building, it's full of sensors that monitor the impact of everyday activities on indoor air quality.

"To understand how airborne particles form indoors, you need to measure the smallest nanoparticles, down to a single nanometer," said Brandon Boor, associate professor in Civil Engineering at Purdue and the study's other corresponding author. "At this scale, we can observe the earliest stages of new particle formation, where fragrances react with ozone to form tiny molecular clusters." The researchers knew from their previous research that new nanoparticle formation was initiated by terpenes, aromatic compounds that determine the smell of things like plants and herbs, released from the melts and reacting with indoor atmospheric ozone (O3). They'd found that activities such as mopping the floor with a terpene-rich cleaning agent, using a citrus-scented air freshener, or applying scented personal care products like deodorant inside the ZEDGE house resulted in pulsed terpene emissions to the indoor air within five minutes. Conversely, using essential oil diffusers or peeling citrus fruits caused a more gradual increase in terpenes.

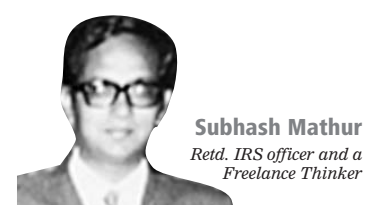
The researchers also examined respiratory tract deposited dose rates (RD), a useful way of studying air pollution that measures the number of particles deposited in the respiratory tract over time. They found that the new particle formation, triggered by using scented wax melts indoors, produced a median RD for 1.18 to 100 nm particles of 29 billion per minute (2.9 x 10<sup>10</sup> min<sup>-1</sup>). That's about 483 million particles per second. The majority of scented-wax-melt-formed particles were deposited in the upper airways. Their small size means that they can migrate between cells and enter the bloodstream, potentially reaching organs such as the brain.

"Our research shows that fragrances and other scented products are not just passive sources of pleasant scents, they actively alter indoor air chemistry, leading to the formation of nanoparticles at concentrations that could have significant health implications," said Jung. "These processes should be considered in the design and operation of buildings and their HVAC (heating, ventilation, and air-conditioning) systems to reduce our exposures."



# NELSON 111-YOU JUMP

He is no more with us, and we will miss him now, forever. I had the good fortune to find one story he had sent, to be published in the pages of Arbit, just a few days before his demise. How better to remember him, I thought, than this piece of brilliant writing to be shared and appreciated by all of us, who knew him and appreciated him while he lived.



For our Arbit readers, here is a memorabilia, a piece sent to me to be published, written by our beloved Subhashji, just a couple of months before his demise. What better to remember him by? His speaking words say it all.

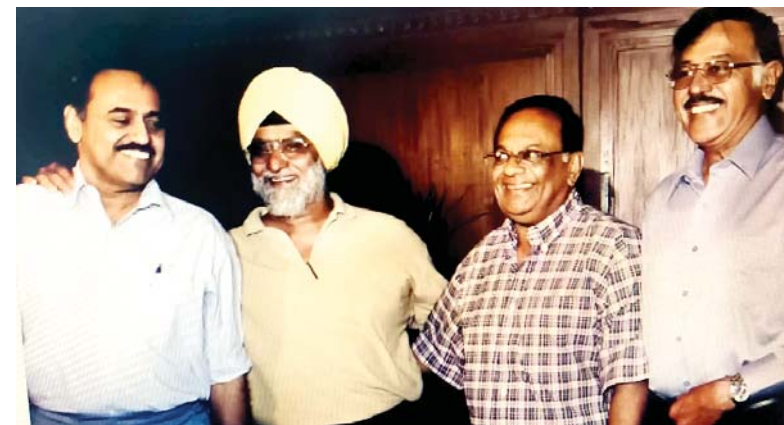
A few months ago, the press and the media carried a small news item about the passing away of Umpire Piloop Reporter at the ripe age of 85. Piloop was an umpire of international standing, in a career spanning 3 decades.

Piloop was the first of the two International neutral reporters in a test match between Pakistan and West Indies at Lahore in 1986. What an honour! After reading this news, my mind wandered off over the past several years, trying to recall the names of some of the great umpires, whom I had the privilege to watch officiating. And who were loved for their eccentric ways? These umpires had the uncanny ability to give the right decisions most of the times. And were loved by the crowds.

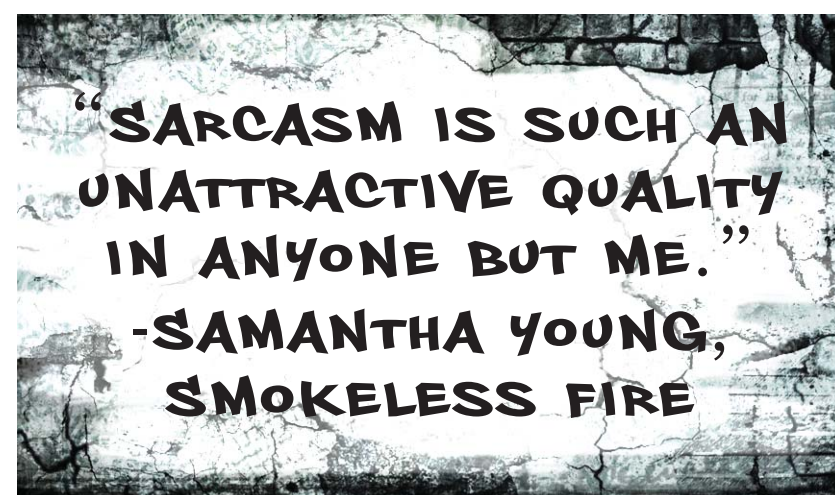
Basically, I was looking for such umpires from pre-DRS era. Some of the names, that popped up in my mind, were Steve Bucknor, David Sheppard, Simon Taufel, Dickie Bird, Venkataraghavan and Billy Bowden. All of them were loved for their on-field decisions and their unique mannerisms.

I decided not to look any further but selected three of them for my cricket story. I picked up the Nelson umpire, David Sheppard, no nonsense Venkataraghavan and the Dickie Bird who did not fly. And Billy Bowden as a reference point.

**The Nelson Umpire**  
David Robert Sheppard was one of the first umpires in the modern world who stood as an umpire in



## THE WALL



## BABY BLUES



## ZITS



## World Anthropology Day

While anthropology might sound like a strangely scientific word, it is actually a field that is rather close to home. In fact, anthropology is the study of human societies, how people interact with one another in cultures, and how these cultures have developed over time into the modern era. World Anthropology Day acts as an invitation for more people to get involved with the study and understanding of human culture. Because understanding helps to foster better connections and relationships, and all of this can help to make the world a better place!



## #CRICKET AND STRONG UMPIRES



reached 111, or 222 or 333 as unlucky in a ritual, dating back to his childhood cricket team days.

**What is Nelson?**  
In cricket, the number 111 is sometimes called 'a Nelson,' after British Admiral Nelson, who allegedly only had 'One Eye, One Arm, One Leg' near the end of his life. This is, in fact, inaccurate, Nelson never lost a leg. Alternate meanings include 'One Eye, One Arm, One Ambition' and 'One Eye, One Arm, One Arsehole.'

Sheppard picked it all up way back in 1944. Among the other superstitions, Sheppard would tie a matchstick to a finger on Friday the 13th, and Sheppard would be touching wood to bring good luck all day.

Also, famous was his tendency to shake his hand while signaling fours.

To this day, many fans amidst the crowds mimic his actions while celebrating boundaries.

Upon his retirement, his fellow umpire, Simon Taufel, said of him, as quoted in his Wisden obituary, "What doesn't get highlighted is (his) man-management skills, creating a happy environment for players to play in. And Shep was magnificent at that. The players had this enormous respect

for him as a person. He put them at their ease and forged relationships that crossed all cultural and political divides."

Simon Taufel further wrote that David Sheppard was the definition of 'Spirit of Cricket,' if there ever was one. Britain, in 97 Birthday Honours, honoured Shepherd by making him a Member of the Order of the British Empire. Sheppard was married to his long-time partner, Jenny. Sheppard succumbed to cancer and passed away in 2009.

Well played, Mr. Nelson! **Venket - Indian Cricketer of many Hues**  
Our very own Srinivasaraghavan Venkataraghavan (Venket for short) is the second umpire that I have selected from the elite panel of umpires to write about, in this column.

We all know that Venket was the top-of-the-heap off-break bowler and part of the famous quartet with Bedi, Chandra Shekhar, and Prasanna.

On Indian spinning tracks, they were world beaters, but rarely did all four get to play all in the same game.

Venket burst upon the Indian cricket scene in his debut home series against New Zealand in

1971, with 21 wickets in four tests. His performances on the cricket field in the West Indies and England brought him enough glory to lead the Indian side to the West Indies in '74. Venket went on to lead India in the ODI World Cups of '75 and '79. Venket retired from active cricket in '83 and became an umpire 10 years later in '93. Venket, as an Umpire, caught the imagination of the cricket fans and the authorities quickly for his solid umpiring.

He was soon in demand. He was quickly drafted to be part of the inaugural panel of International umpires, established by ICC in '94 and became a member of the Elite panel of top Umpires created in 2004. Venket umpired differently. He was not a Shot Gun umpire. He took his time to think it out before raising his finger. And his fame spread far and wide. Rather quickly, Tony Grieg loved him dearly.

**Grieg on Venket picking up Ponting**  
And Venket raises his finger. Ponting is bewildered and disappointed. Inevitably, Ponting begins the long slow march back to the Pavilion, shaking his head in astonishment. Later replays showed that Venket got it abs right. But Venket was simply not a wily spinner or an elite umpire, but Venket also served as a selector, a columnist and as a sports commentator. Indian cricket fans over several decades were enthralled by the Venket mystique. Padam Shri Venkataraghavan lives quietly in Chennai with his wife Rajni and two sons.

Without much further ado, my third choice was Dickie Bird, the Englishman who ruled the games with iron hand, when officiating as an umpire.

If Dickie felt that the ground was still wet from the rain, then, there was no way Dickie would allow the game to resume till he was convinced that it was fit for play and safe for players.

His fellow umpires invariably

Dickie Bird," he replied. "This is one of his hats. I took it off his head at the World Cup final. We all ran onto the field and I won that race."

Bird retired in 1996 after standing in a Test between India and England, where Bird was given a Guard of Honour by both teams and a standing ovation from the crowd. Post retirement, Bird penned his biography, simply titled *My Biography*, which sold over a million copies.

At age 90+, Dickie leads a quiet life. And before I close, I must mention the 'crooked' finger of Billy Bowden. Raising his crooked finger to indicate 'out' or four or six was, perhaps, Bowden's manner of expressing his annoyance at being disturbed from his thoughts.

**NEW DEVELOPMENTS**  
After the introduction of the DRS system of review, life of on-field umpires has undergone many changes. Every decision is challengeable via the giant screens seen publicly by all. Nowadays, there is the third TV umpire and a fourth umpire for emergencies. A new post of referee was the latest addition. Yet, controversial decisions continue to be made, leading to much recrimination amongst umpires, players and the crowd.

Was Kohli out? What about Pant? Although umpiring has become much tougher than before, the role of the umpire continues to be crucial and critical to a wildly popular game.

Will we see a day when on-field umpires would disappear totally from the cricket grounds to be replaced by the finest 'chips'?

The world awaits so much with the 'March of Technology.'

"Man, haven't you heard of Mr. rajeshsharma1049@gmail.com

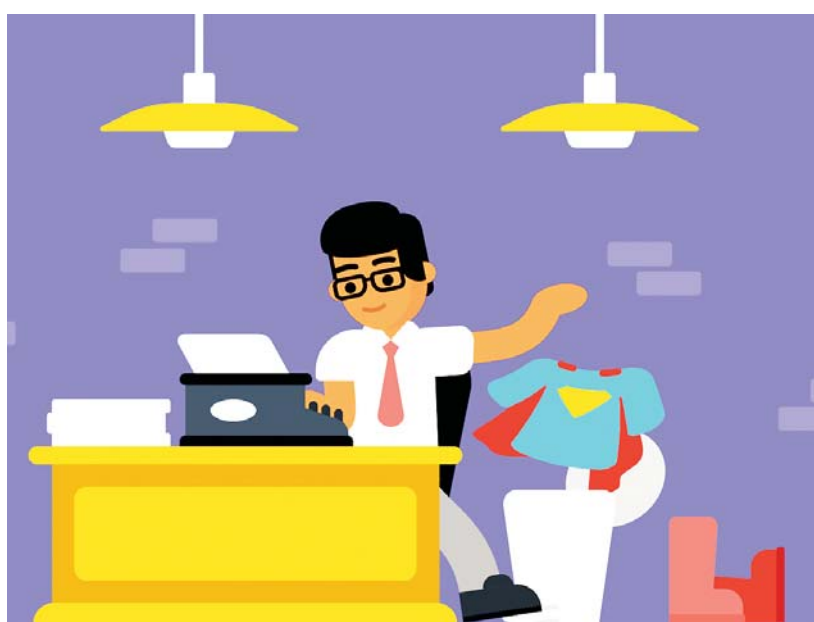


## #CAREER TRANSITIONS

### How to Answer 'Walk Me Through Your Resume'

You need to deliver your answer in less than two minutes, no matter how many jobs you've had and how many years you've worked, or you could risk losing the recruiter's attention.

The fastest way for recruiters to determine if you have the necessary skills and experience for a job is by asking, "Can you walk me through your resume?" It sounds like an easy question, but don't be fooled! Your answer will determine whether the recruiter considers you a serious candidate. Recruiters aren't looking for a laundry list of accomplishments or responsibilities. Instead, they want a focused narrative that highlights why you're the perfect fit for the new role. Here's the catch! You need to deliver your answer in less than two minutes, no matter how many jobs you've had and how many years you've worked, or you could risk losing the recruiter's attention. Here are three steps to ensure that your response to this crucial question leaves a lasting impression.



#### 1. Highlight your experience through the lens of the new job

Determine which accomplishments, skills, and capabilities from each of your past jobs are directly relevant to the job description's key requirements. Don't repeat the same responsibilities from one job to the next, the goal is to show career progression which aligns with the role you are pursuing. For example, the job descrip-

tion for a Paid Media Director role includes language such as, own client relationships, creating media planning strategy from cross-platform data, must have familiarity with social media, email, and DSP platforms. Successful candidate will have excellent writing, reporting, and project management skills.

#### 2. Build clear transitions between jobs

When explaining job moves, it's essential to provide context that demonstrates intentionality and alignment with your career growth. Highlight the reasons for each move, were you seeking to develop specific skills that are now crucial for the role you're applying for? Did a former manager or colleague recruit you because they valued your expertise? Mentioning these highlights your professional reputation. If you changed industries or shifted careers, explain how the transition was a strategic step that prepared you for the responsibilities of the position you're pursuing. If you moved jobs every one to two years, your explanation for changing jobs must make sense and be delivered with confidence. If you were terminated in a mass layoff, you can mention that the company changed strategy

or cut programs, and your job was impacted. If you were fired for performance, view your termination through your own positive perspective and use that as your transition statement.

The key is to be proactive and fill in breaks in employment before you are asked about them. Yes, it's okay to say you took time off to raise children, but talk about how you kept your skills updated during that time.

What you don't want to focus on is the negative, such as being burned out, needing to take time off for your mental health, or hating your manager. When you don't have a deep relationship with an interviewer, such statements could make them question whether you can be successful in the job under less than perfect conditions, and no job is perfect.



#### 3. Showcase your unique value

Identify what sets you apart from other candidates and weave it into your narrative of past roles. Highlight specific skills, experiences, or perspectives that bring unique value to the role you're pursuing. For example, if you have a background in finance, emphasize how it equips you with a data-driven approach to aspects of the new role. Or, if you're transitioning from a creative field like journalism to marketing, focus on the transferable skills that will drive results in the new role.

Be bold in drawing clear connections between your unique skills and the role you're interviewing for, showcasing how your experience enables you to deliver exceptional value beyond what other candidates can offer. Connecting your experience to the job you are pursuing and showing progressive skills acquisition throughout your career in a succinct story will leave the interviewer satisfied that you are capable of succeeding in the new role. Highlighting your unique skill is the icing on the cake that not only sets you apart from the competition, but also makes you a more memorable and compelling choice for the job.

By Rick Kirkman & Jerry Scott

By Jerry Scott & Jim Borgman