On the Road to COVID-19
Mitigation on Public Transportation

Air Circulation

Social distancing alone may not work on buses. The virus spreads throughout the bus in seconds and takes minutes to clear. Without proper precautions, airflow in buses could make transit ridership risky.

Mitigating the Virus

MS2 Virus  
Phi 6 Virus  
T7 Virus

3 different (bacteriophage) viruses were used to assess the efficacy of different technologies. Viruses were measured in the air and on surfaces.

Effective Technologies

Photocatalytic Oxidation
UV-C Lights

Both technologies will protect passengers and drivers from both the coronavirus and other air-borne viruses, such as the flu. These technologies would be valuable in post-corona times.

Only effective after the virus enters the HVAC.

Face masks should be worn. They are the first line of defense.

Virus Mitigation Results

from Air

Positive pressure mitigated all viruses on surfaces by 100%.

Copper foil tape and fabrics with high-percentage of copper mitigated the Phi6 virus by 99.7%. Results were inconclusive with the other two viruses.

from Surfaces

Notes:
Transit could be safer in winter, since higher HVAC heating temperatures alone mitigate large percentages of the viruses.

These findings could equally be applicable to any confined space with HVAC, such as offices, classrooms, court houses, shops, restaurants, etc.